

# Data Analysis and Visualization with Excel Training

Microsoft Authorized Training · Applied Technology Academy

This hands-on course introduces participants to data analysis and visualization techniques using Microsoft Excel. Learners will explore a variety of tools such as tables, PivotTables, PivotCharts, conditional formatting, formulas, functions, and Excel's powerful visualization features to derive meaningful insights from data.

| LEVEL               | DURATION      | EXPERIENCE               | AVERAGE SALARY              | LABS       |
|---------------------|---------------|--------------------------|-----------------------------|------------|
| <b>Intermediate</b> | <b>2 Days</b> | <b>1 year: Microsoft</b> | <b>\$95,000 – \$100,000</b> | <b>Yes</b> |

## Course Overview

This course is ideal for professionals who want to make data-driven decisions and present data in an effective, compelling way.

You will:

- Clean and prepare datasets for analysis
- Apply Excel's built-in tools to analyze large datasets
- Use formulas and functions to summarize data
- Build and customize PivotTables and PivotCharts
- Apply conditional formatting and data bars for visual emphasis
- Create dashboards and data summaries
- Utilize charts to visually represent trends and comparisons
- Share reports with others using print, PDF, and Excel online

## Course Outline

- **Module 1: Introduction to Data Analysis in Excel**
  - Overview of data analysis process
  - Importance of structured data
  - Introduction to Excel's data analysis capabilities
  - Keyboard shortcuts and productivity tips
- **Module 2: Preparing and Cleaning Data**
  - Removing duplicates and blank values
  - Text to columns and Flash Fill
  - Using filters and sorting
  - Data validation and removing errors

- Converting data to Excel Tables
- **Module 3: Formulas and Functions for Analysis**
  - SUM, AVERAGE, COUNT, MIN, MAX
  - Logical functions: IF, AND, OR
  - Lookup functions: VLOOKUP, HLOOKUP, XLOOKUP
  - Text functions: CONCAT, LEFT, RIGHT, MID, LEN
  - Date and time functions
- **Module 4: PivotTables and PivotCharts**
  - Creating PivotTables from raw data
  - Grouping, filtering, and sorting in PivotTables
  - Using slicers and timelines
  - Building PivotCharts to visualize summarized data
  - Designing interactive dashboards with slicers and filters
- **Module 5: Data Visualization Techniques**
  - Choosing the right chart type
  - Creating and customizing:
    - Column, bar, and line charts
    - Pie and donut charts
    - Combo charts
    - Waterfall and sparkline charts
  - Using data bars, icon sets, and color scales
- **Module 6: Using Excel's Data Analysis Tools**
  - Quick Analysis Tool
  - Goal Seek and What-If Analysis
  - Introduction to Power Query (optional)
  - Introduction to Power Pivot (optional)
- **Module 7: Creating Dashboards and Reports**
  - Combining charts, tables, and slicers
  - Using named ranges and form controls
  - Formatting for clarity and presentation
  - Exporting to PDF and printing reports
  - Sharing files with Excel Online and OneDrive

## Intended Audience

This course is designed for professionals and students who want to build foundational skills in data analysis using Microsoft Excel.

## Prerequisites

- Basic familiarity with Microsoft Excel
- Experience working with spreadsheets and simple formulas
- No prior experience with data analysis or advanced Excel features required

## Follow-On Courses

Microsoft Power BI

**Ready to enroll?** Call 800.674.3550 or email Info@AppliedTechAc.com — private team cohorts, GSA MAS purchasing, military credentialing funding, VA GI Bill and VR&E and student financing available.