

## MS Excel for Research

### 1. Data Cleaning

Download st\_data.xlsx and open Sheet1.

- a. Standardize name casing (Proper Case).
- b. Fix inconsistent date formats.
- c. Fill missing GPA and Attendance with average values.
- d. Standardize Department names.
- e. Identify and remove duplicate rows.
- f. Format phone numbers uniformly (e.g., (123) 456-7890).
- g. Highlight missing values using Conditional Formatting.

### 2. Data analysis and arranging

Open Sheet2

- a. Sort students by GPA (descending)
- b. Filter students with Attendance < 80%
- c. Group data by Year and compute average GPA
- d. Create a PivotTable showing **average GPA by Department and Year**
- e. Filter only Year 3 students

### 3. Data visualization

Open sheet1

- a. Bar Chart: Show average GPA by Department
- b. Pie Chart: Show distribution of students by Gender
- c. Scatter Plot: GPA vs Attendance (%)

### 4. Basic statistical analysis

Open sheet3

- a. Use the Data Analysis Toolpak to generate Descriptive Statistics for Score\_Math for both Class A and Class B. Observe the generated comparison of the performance of Class A and Class B.