

Data Analysis with Microsoft Excel

CSE 1300 – Assignment 2

SPRING 2026

Overview

In this assignment, you will practice importing a CSV file into Microsoft Excel, cleaning and organizing the data, and creating visualizations for better analysis. You will also apply basic formulas and sorting techniques to analyze hospital trends. Submit the final .xlsx file along with screenshots of your visualizations in a PDF or Word document.

Dataset

student_attendance.csv download from FYE Website.

Columns:

Student ID, Course, Date, Attendance Status, Class Duration (minutes)

Instructions

Part 1: Import the CSV File into Microsoft Excel

1. Download the provided CSV file named student_attendance.csv from FYE website.
2. Open Microsoft Excel.
3. Click on the Data tab in the Excel ribbon at the top of the screen.
4. Select Get Data → From Text/CSV.
5. Locate and select the file student_attendance.csv, then click Import.
6. In the preview window:
 - Ensure the Delimiter is set to Comma (,).
 - Verify that the data appears in separate columns.
7. Click Load to import the data into a new worksheet.

Part 2: Data Cleaning & Organization

1. Rename a Column

- Locate the column titled “Attendance Status”.
- Click on the column header.
- Rename it to “Status”.

2. Create a Helper Column for Attendance

1. Insert a new column to the right of the Status column.
2. Name the new column “PresentFlag”.
3. In the first data cell of this column, enter the formula:

=IF(D2="Present",1,0)

(Your column letter may differ depending on your sheet.)

4. Press Enter, then drag the formula down to apply it to all rows.

3. Add a New Column: “Total Class Time”

1. Insert another new column to the right of Class Duration (minutes).
2. Name the column “Total Class Time”.
3. Enter the formula:

=Class Duration × PresentFlag

(Use the appropriate cell references based on your sheet.)

4. Apply the formula to all rows by dragging it down.

4. Apply Sorting

1. Select the entire table (including headers).
2. Click Data → Sort.
3. First Sort:
 - Sort by Course
 - Order: A–Z
4. Add a second sorting level:
 - Sort by Date
 - Order: Oldest to Newest
5. Click OK.

5. Apply Formatting

- Bold the header row.
- Adjust column widths so all text is clearly visible.
- Apply cell borders to the entire table for neatness and readability.

Part 3: Data Visualization

You will create the following three charts in Excel.

1. Column Chart – Total Attendance by Course

1. Create a PivotTable:
 - Select the entire dataset.
 - Click Insert → PivotTable.
2. Set up the PivotTable:
 - Rows: Course
 - Values: Sum of PresentFlag
3. Select the PivotTable data.
4. Insert a Column Chart.
5. Add the chart title:
“Total Attendance by Course”
6. Label axes and apply clear, readable colors.

2. Line Graph – Attendance Trend Over Time

1. Create a new PivotTable.
2. Set up the PivotTable:
 - Rows: Date
 - Values: Sum of PresentFlag
3. Group the Date field by Month (right-click → Group).
4. Insert a Line Graph.
5. Add the chart title:
“Attendance Trend Over Time”
6. Format:
 - X-axis: Months
 - Y-axis: Number of Students Present

3. Pie Chart – Present vs Absent Distribution

1. Create another PivotTable.
2. Set up the PivotTable:
 - Rows: Status
 - Values: Count of Student ID
3. Insert a Pie Chart.
4. Add the chart title:
“Attendance Distribution”
5. Enable data labels (percentages and/or counts).

Part 4: Enhancing Visualizations

- Use consistent colors across all charts.
- Add axis titles, legends, and data labels where appropriate.
- Resize and position charts so they are easy to read and visually appealing.

Submission Guidelines

- Save the updated Excel file as attendance_updated.xlsx.
- Take screenshots of your three charts and insert them into a Word document.
- Save the document as Assignment2_Charts.pdf.
- Submit both files:
 - attendance_updated.xlsx
 - Assignment2_Charts.pdf
- Submit your files on the learning platform by the due date.
- Late submissions will not be accepted.