

Getting Up to Speed with Excel

Installing the Data-Analysis Toolpak plus Graphing

EVS 430 Advanced Quantitative Methods

Excel is the tool you are most likely to use in your career, whether it be for data analysis, budgets, tracking projects, or graphing. There are other, more specialized, tools but Excel is readily available and commonly used. Master it.

Data-Analysis Toolpak

Our first task is a simple, one-time installation of the Data-Analysis Toolpak. There's a link with Microsoft's instructions on the class website, but we will also walk through it together in class.

Graphing

First Month:

1. Open the weight-data file from the class website.
2. Go to the *FirstMonth* file tab.
3. Graph the Date versus Weight with a scatterplot.
4. Add a trendline.
5. Extend your Y-axis down to 200 pounds.
6. Extend your trendline to where it intersects Y=200.
7. What is the date at which you project that the weight will reach 200 pounds?

All Data:

1. Go to the *AllData* file tab.
2. Graph the Date versus Weight with a scatterplot.
3. What patterns do you see?
4. Determine the average and variance of the weight.
5. Look at the graph of your data, pick a month, and calculate the average and variance for it. This is a *local* variance. What does it represent?
6. Create three new columns of Year, Month, Day. Use a function to extract these from the date.
7. Create another new column, DayofWeek (Monday, Tuesday, etc.)
8. Sort your data by DayofWeek.
9. Calculate average weight for each day of the week.
10. Plot the average weight (7 points) using a bar chart.
11. What patterns do you see?

Conditional Functions

1. Create a new column, Season (winter, spring, summer, fall).
2. Use a conditional function to label December, January, February as Winter; March, April, May as Spring; June, July, and August as Summer; and September, October, and November as Fall.
3. Look at each season separately. Any patterns?

Data Formatting

Excel allows considerable formatting possibilities for your data. Creating a good-looking table is often desirable for reporting spending from grant proposals. For the following data, experiment with ways of creating a beautiful table to input into a Word document.

Funds awarded: \$20,000

Capital expenses: \$11,432 for a 2015 Ford truck; \$2,180 for a camper shell for the back of the truck.

Summer fellowship: \$4,500 for a student's summer research project.

Supplies: \$400 for water-testing materials; \$1,200 for fuel; \$288 for materials to prepare reports and posters.

When you complete this, upload your spreadsheet to Moodle.