Excel Workshop

Step by step tutorial

For Thursday, February 1st, 2018

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## Objectives

1. To familiarize everyone with the excel layout
2. To demonstrate and learn functions within excel
3. To introduce the language of excel
4. Introduce data entering and manipulation
5. Practice data organization and formatting
6. To provide everyone with a solid jumping off point for easy excel use in the future!

## Open Excel

Start with blank workbook but browse and explore templates.

In search bar you can search for more templates online based on the type of spreadsheet you’re looking for

## Layout

Different tabs with different ribbons and then groups. Each group has a launch button which will give you even more options that Microsoft couldn’t fit on their ribbon groups

## Spreadsheet

 Columns (letters) and Rows (numbers)

 Cells-each one has a name based on intersection between column and row.

 Each row contains a record

Sheets are at the bottom and they comprise the Workbook

## Make a Table

(Zoom in on a section of spreadsheet)

(A1 cell)-Type Birthdays

* It might look like it’s spilling over into the next cell but it isn’t
* To make it look better just stretch out the column by putting mouse on the line (double sided arrow)

## Commands

* Shift enter moves up and enter/return moves down
* Tab to the right, shift tab to the left
* Up/Down/Left/Right arrows

## Labeling

* Cell A2- Type First Name, Last Name, Birthday, Age
* Misspelled word-needs to be adjusted in the search bar. When you click on the cell, anything you type replaces what was there because you are on a cell. To get in a cell, you need to double click in the cell

## Autofill Handle

* The autofill handle is a basic command of excel whereby a value in one cell can be duplicated in others next to it.
* Bring your mouse down to the bottom right corner of a cell with information in it such as Date (Notice that the mouse will change from a white to a black X)
* When the mouse becomes a black X left click and drag into an adjacent cell
* You will see that the word Birthday has duplicated into that cell

## Deleting Cells

* We don’t actually want the cells to all say Birthday so what we’re going to do is select all the birthdays save for the one at the top
* Then right click and hit delete
* Excel will ask you if you want to shift your cells up, down, left or right. When you do this and you have other data present on your spreadsheet, be aware that it will also shift those cells as well so think carefully about which way you want your cells to shift

## Merge and Center

* At the top of the title, select the Birthdays title and make it bold. Then select all the cells in the corresponding rows and merge and center so that it’s one big cell

## Adjusting Margins

* Then adjust the margins so everything fits so go to the center of each column header and double click so excel will adjust the columns to perfectly fit the widest cell. OR highlight the entire table and double click between any column and it will perfectly size all of the columns to the corresponding data.
* You can also click and drag one column and all of the columns highlighted will be the same width as the one you clicked and dragged.
* You can also click on the row number to quickly select all values in a row or select all the letters at the top of each column to quickly select all the columns. Everything applies to rows as well!

## Formatting

Copy format function can be found in the upper left corner of excel in the clipboard group that looks like a paintbrush. It will copy the format of a cell so that you can have the same format in other cells. It doesn’t change the content it just changes the cell format.

## Conditional Formatting

* Highlight a column and go up to conditional formatting and it will assign a color to a value present in your data set as an easy way to organize and visualize your information
* You can then go to the number group and select the type of value your numbers are such as percentages, currency etc.

## Formula

* + I have your birthdays but now I’d like to calculate the average age of students in the room so what I’m going to do is put today’s date in a blank cell which is 1/2/2018.
	+ Next I’m going to make a new header called **age** where everyone’s ages will be calculated.
	+ Click in the first empty cell and type the formula **=INT((F1-C3)/365).** Then highlight the F1 cell and to anchor the cell, either place a dollar sign manually after the F and the 1 or just hit F4 on your keypad. This means this cell is now anchored and will not be manipulated if you change a cell in the corresponding row.
	+ Now what you can do is bring your mouse to the bottom right corner of the first number in the age column we just created and drag down so that the formula transfers to the next birthday to calculate age.
	+ When you click on the cell you can see the formula in the bar up top which tells you the cells it was taking the information from.
	+ Now that we have a row of everyone’s age, we can calculate the average age of the students in this room. First choose a blank cell on your spreadsheet (I like to use the cell at the bottom of a column I’m trying to calculate from).
* To make a formula to calculate the average ages of students, select a blank cell on the screen and type **=avg(select all values to be averaged together with your mouse)** hit enter

## Troubleshooting Formulas

* What if you see ######? That means the column is too narrow to display all the numbers and it needs to be widened
* What if your formula doesn’t work? Check to see your formula in the bar up above. Does it include all pertinent cells you are trying to use?
* Is the reference data anchored with dollar signs? (Note: it’s not enough just to anchor the cell, you have to anchor both the row and column values in the cell)

## Sort and Filter

Highlight all the values in the fields and hit sort and filter in the upper right corner.

* Select Custom Sort for more autonomy
* Here you can determine if you would like to sort and filter by a particular column such as by year so that students are numbered from oldest to youngest.

## AutoSum

* Select all the ages by dragging mouse from the first number to the last number OR you can just perform the function without selecting the data and it will automatically select the data above just be careful with your result that it took the correct data
* Hit AutoSum and select a function such as Average, Sum, or Count Numbers
* Notice the new value will appear at the bottom of the column of numbers
* It is a very nice shortcut to perform basic formulas and functions on excel

## Formula Library

Say you want to perform a function through a formula but you don’t know what that formula might be. You can go to the **Formulas** tab and take a gander at some of the formula options available.

* At the bottom of all formula drop down menus you will see an insert function option – click on that
* In the box above you can type a brief description of the command you want to carry out and it will provide you with some options
	+ So say you wanted to add all student ages go ahead and type in “add”
	+ Then you can click on the function options that pop up and below will be a brief description of what that formula will do to your data if you select it. The one that says SUM is the one that sounds most like addition so click on it
	+ Then highlight the numbers you want to add together in your spreadsheet and click OK