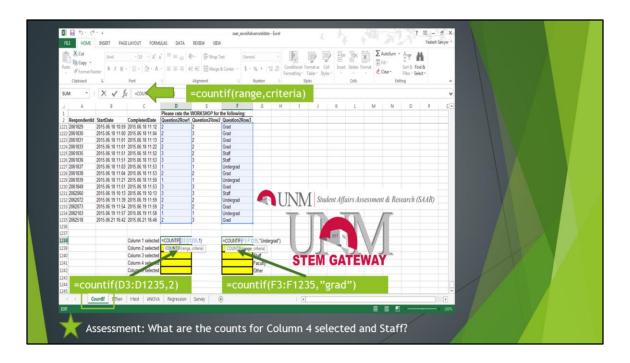Welcome to the EASE workshop series, part of the STEM Gateway program. Before we begin, I want to make sure we are clear that this is by no means meant to be an all inclusive class in Excel. At each step, there are many options that I won't have time to go over, so I encourage you to spend some time on your own playing with them.

If you haven't already, please download the supplemental dataset from the EASE website. The URL is also on this slide.

Also, the images are from the newest version of Excel, 2013, for PC's. Older versions, or those in Macs may look slightly different, but the overall concepts should still apply. This power point will also be available on the this site, so you can always refer back to it at a later time if necessary.

Lastly, in case you don't already know this, and don't have Excel on your computers, you can get it for free through IT's website under software.

This supplemental document will go over "CountIF" and "IfThen" statements.

Assessment: What are the counts for Column 4 selected and Staff?

We'll start with "count if." This feature is nice because it lets you count the number of data points matching a given criteria without having to apply a filter, as you learned in the Basic Excel workshop. The general format for the command is =countif(range,criteria), where the equals sign is telling Excel you are about to give it a command, the 'countif' statement is telling Excel to count certain values only if it meats certain criteria. You have to designate what data you want it to search, and what that criteria is.
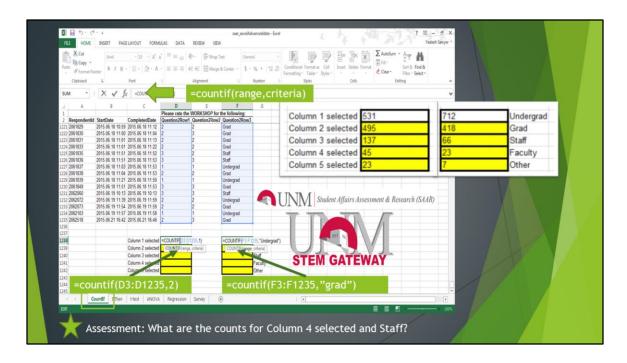
The criteria can be a certain value, a relation to a value, or certain text. This data set is an output from evaluations for our workshops.

Let's try it with a given value first. So, if you scroll all the way down to the bottom of the data set, you'll see yellow boxes. I've already completed the first function for you, but you'll fill in the rest. You'll start in the column 2 selected box and type the beginning of the function. When it comes to the range, you can just highlight the cells you want Excel to search, which in this case, will result in D3:D1235). Now, you have to set the criteria. We want the values to be counted only if column 2 was selected, so we will enter a '2' for the criteria. Now hit enter and a value should show up.
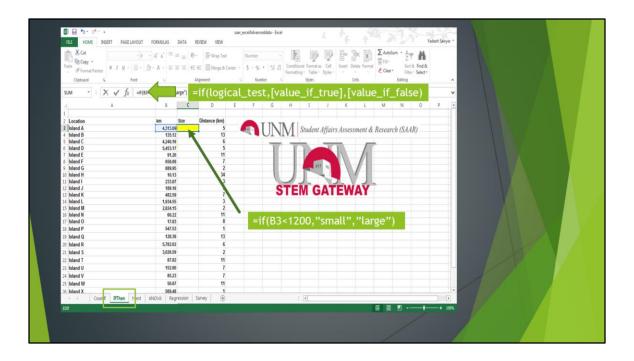
Another way to set the criteria is with text. I already counted how many undergrads there are in the data set. You'll repeat this for the other status. The beginning of the function is the same, with the initial command of count if and selecting the value range. The difference is the criteria. You have to use quotations to indicate you want specific text to be searched, rather than a single value. I typed 'undergrad' but you will type 'grad,' then hit enter.

The last way to set the criteria is if values are in relation to each other, which we'll cover in a minute with If Then statements.
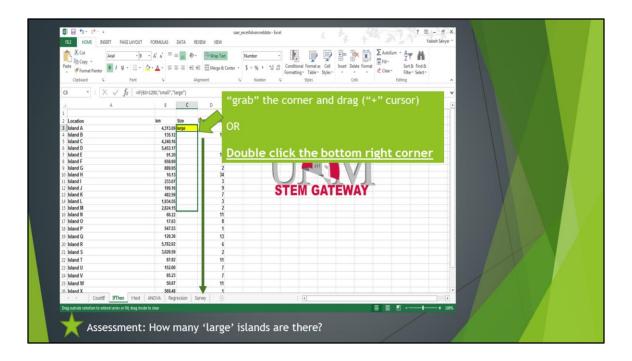
Now, repeat these functions to fill in the rest of the yellow cells and answer the first question on your assessment sheet.

Assessment: What are the counts for Column 4 selected and Staff?

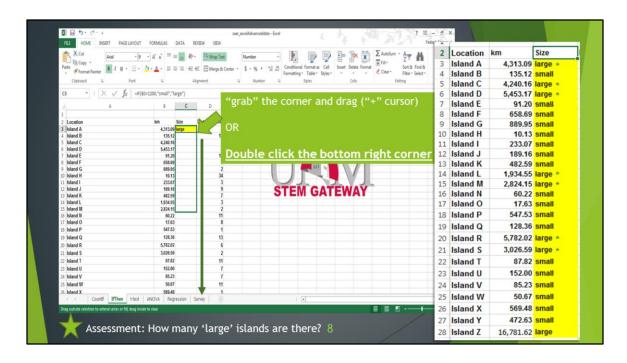Here are the answers so you can make sure you did it correctly.

Now on to "if then" statements. Click over to the IfThen worksheet. This is a data set of various islands and their size and distance to the mainland. We want to determine if an island is small or large based on size. We start with an equals, as we always do for a command or function, then type if(. We will now say if a certain cell fits some criteria, then we want the output cell to say A, but if it does not, then say B. So, in this case, in the yellow box, you'll say if the island size is less than 1200, then you want the cell to read 'small,' if it is not less than 1200, then read 'large.'

Assessment: How many 'large' islands are there?

Since the criteria is the same for all cells, we can autofill the remainder of the islands. We couldn't do this in the count if function, because we had different values for when the data was counted. In Basic Excel, we autofilled by placeing the cursor on the bottom right corner until it looks like a plus sign, then grab that and drag it all the way down.

But, I want you to do it another way. Double click the bottom right corner. This will fill all cells as long as there is a value in the column to the right.

Now that you have either a 'small' or 'large' for island size, you can answer the assessment question.

Here are the answers so you can make sure you did it correctly.