

Setting up a Gradebook in Excel

Casey Weaver
Spring 2012

I'm going to assume that you are familiar with the usual operations encountered in Windows and word processing (opening, closing, and saving files; copy; paste; formatting text, etc.).

Two points to keep in mind:

- Save often, but *think* before saving: “Do I really want these changes to take effect?” If not, exit and *don't* save the changes, then reopen your file, OR
- Save As (save it under a new name), OR
- Undo! (Remember, Undo is your friend). There are several ways to undo (from the menu bar-- Edit | Undo, key combination Ctrl + Z, or click on the undo arrow up on the toolbar--it looks sort of like this: ). N.B. You cannot undo a save.

1. **The first step is to get the names into the spreadsheet.** There are several ways to do this. Here are a few:

From a class roster in myUCA

- Log into myUCA
- Click on the Self-Service tab
- Choose the Faculty link
- Choose Summary Class List from the menu
- Select the term and click the Submit button
- On the CRN page click on the desired class (click on the down arrow if necessary), click on it, and then Submit
- On the class list page, highlight all the lines of student names (hold down the left mouse button and drag the mouse all the way from the first student to the last one)
- Copy (Ctrl+C shortcut or Edit|Copy from the menu bar)
- Go to your Excel worksheet.
- Right-click in the cell you want to “start” in
- Choose Paste Special... from the pop-up menu
- Select Text in the dialog box, and click OK or hit the <Enter> key

From an Excel file (such as CRN12345.xls)

- If the ID number and name are all in one cell, follow these steps:
- Highlight all the IDs/names
 - On the menu bar, select Data
 - On the Data menu, click on Text to Columns... This opens up a Wizard to help you through the next steps.
 - You will probably want to select Delimited, then click the Next button
 - Check which delimiters apply (probably space and/or tab). Click Next.
 - Click Finish

From a text file (such as CRN12346.txt)

- If the text file is comma delimited, just open it up in Excel: in the Open dialog box under Files of Type, choose All files (*.*). The text file should now be visible.
- Choose the file, and when you click OK, it will pull up the Text Import Wizard
 - Follow the steps in the Wizard (Delimited, comma separator, etc.)
 - Finish

Type in everything by hand

Lucky you! ☺

2. **The next part involves formatting and setting up your columns.** These operations can be done in any order.
 - a. Delete any unwanted columns (highlight the columns, right-click, and choose **Delete** from the pop-up menu).
 - b. Adjust column widths, if needed.
 - c. Alphabetize list, if needed.
 - i. Select all the data (names, ID numbers).
 - ii. On the menu bar, click on **Data**, then **Sort...**
 - iii. Under **Sort by**, choose the column which contains the last name. Ascending order will give alphabetical order.
 - iv. Be sure to choose **No header row** under the **My data range has heading** before clicking the **OK** button.
 - d. Insert row(s) to make room for headings (e.g., assignments, quizzes, exams, and so on): At the far left (at the row numbers), highlight the number of rows you want to insert, right-click the mouse, and then choose **Insert** from the pop-up menu (inserting columns is similar, except that you highlight the number of columns).

3. **Helpful tip:** If you have a class list that extends beyond one screen height, or if you know that you will have a large enough number of columns that they won't all fit on one screen width, here's a useful tip (this also applies to having data that take up more than one screen width). It's called "Freeze Panes." On the upper right, just above the vertical scroll bar (above the), there is a (very) small rectangle. There is a similar one at the bottom, to the right of the horizontal scroll bar (beside the). When you hover your cursor above the little rectangle, its image changes to look something like this:  or this: . Drag this symbol (it will turn into a long gray bar) over to just to the right or below the rows/columns you want to "freeze." Then, on the **View** tab, then click on **Freeze Panes**. Choose the **Freeze Panes** option. Alternatively, you can choose to freeze only columns or rows. Now, no matter how far you move down or to the right, your column headings and student names will stay visible.

4. **Set up your columns** (just as you would in an old fashioned gradebook). If you change your mind, it's easy to switch columns around.

5. **Enter your data** (quiz/test scores, etc.). The number pad is really useful for this. After you've entered the numbers, be sure to check and double check them for accuracy. You can also import grades from Blackboard--just beware that the roster will include Demo Student and you, and maybe others.

6. **Now for the fun part. Formulas and functions!** This is the main reason for using the spreadsheet--it can do all the "heavy lifting" in terms of adding, calculating percentages, weighting, and it can even assign letter grades. You can also collect statistics, and if you want, make pretty charts or graphs.

Some caveats:

 - a. The first thing you need to know about is selecting a range of cells to operate on. Excel is actually pretty smart; if you place a function in a cell adjacent to a range (meaning a consecutive set of cells) containing data, it will automatically select that range (it usually indicates the selection by a colored outline). Be sure to check the selection--if it's what you want, just hit the <Enter> key. If not, you can change the range by dragging the outline to a different range, or you can enter the range by hand into the formula. The range is entered in the

form **X2:X9**, where X2 and X9 represent cell references. Of course, your cell references will likely be different. By the way, it's not necessary to capitalize the letters--Excel does that automatically.

- b. By default, cell references are *relative*, meaning that if you copy or move a function, it references new cells in the same position *relative* to it. These positions may or may not be what you want. If you get numbers that don't make sense, be sure to check the cell range you're referencing, and change it if necessary.
- c. If you want to reference a particular cell all the time, you need an *absolute* reference. Absolute cell references take the form **\$X\$1**. This refers to cell X1, no matter where you are in the spreadsheet, and no matter where you move the formula that refers to it.

7. Useful functions:

SUM
AVERAGE
MEDIAN
STDEV
MAXIMUM
MINIMUM
SMALL
COUNT, COUNTA

If you aren't sure what a formula is, or how to use it, or you need a different one, you can consult the **Help** menu, or use the insert function operation by clicking on the f_x symbol to the left of the formula bar. A dialog box will appear that will help you look up what you need. **Help** will also give you examples of how the formula is used, and explains the format for inserting your cell references. Some formulas can operate on a single cell, and some operate on a range, or even an array (a two-dimensional reference).

8. Formulas

- a. They are always preceded by an equal sign (=). That's how Excel knows it's not just a text entry.
- b. You can make up your own formula, and incorporate functions if needed.
- c. If you make a mistake in the formula, Excel will often let you know, but it's not always helpful in directing you in how to solve your problem. You will often have to do some close looking in order to ferret out the error. Sometimes the formula will work, but it gives an incorrect result; this is usually because you've chosen the wrong function, or your cell reference(s) are incorrect.
- d. Use parentheses to separate operations. Excel colors the parentheses as you start to type them, so it's not too hard to make sure you close them all (as long as you're not colorblind). Excel does follow the mathematical order of operations (exponents before multiplication/division before addition/subtraction).
- e. Examples:
 - i. Add two numbers: =C3+C4
 - ii. Subtract: =B4-B3
 - iii. Percentage: =100*P34/\$P\$3
 - iv. Weighted percentage: 0.75*(100*P34/\$P\$34) + 0.25*(100*Q34/\$Q\$34)
 - v. Drop the lowest quiz score: =sum(G5:X5)-minimum(G5:R5)
 - vi. Assign a letter grade:
=IF(D8>=90,"A",IF(D8>=80,"B",IF(D8>=70,"C",IF(D8>=60,"D","F"))))
OR: =IF(D8>89,"A",IF(D8>79,"B",IF(D8>69,"C",IF(D8>59,"D","F"))))

9. **Formatting:** Use colors and borders to make different areas stand out from each other. You can also format how numbers are presented (setting the number of decimal places, putting the leading zeros in front of ID numbers, etc.). Select the cell or cells you want to format and right-click with the mouse. Choose **Format Cells...** on the pop-up menu, then choose the appropriate tab (such as **Number**). Another thing you can do is to name cell ranges (such as naming all scores in the final exam column); you can then use the name reference instead of a direct cell reference.

10. **Using more than one worksheet within a workbook:** I like to keep different aspects of my class (e.g., lecture and lab) on separate worksheets within one workbook. To reference a cell in a different worksheet, you append the name of the worksheet (you *did* rename your worksheet to something more useful than **Sheet1**, right? Just double click on **Sheet1**, type in the new name, and <Enter>.), followed by an exclamation point (!), then the cell reference. For example: =Lab!R62. If the name of the sheet has spaces in it, you have to surround the sheet name with *single* quotes, like this: = 'Clinic work'!Q10. Just make sure your reference points to the right cell. Note: if you delete cells on one sheet, it may change the cell references on a sheet that uses those references, so be sure to check that all references are correct (and fix them if not).

11. **Page Setup and Printing**
 - a. Basically, you can set up your pages to look anyway you want them. This works much like it does in a word processor. Adding headers and/or footers can be useful for identification purposes (such as course identity, semester, etc.). You can also use color, borders, shading...you get the idea.
 - b. Likewise, printing is much like you would encounter in other Microsoft programs. However, Excel usually doesn't print gridlines by default, so you may want to turn that on permanently if you want to have gridlines printed all the time (this is on the **Page Layout** tab). Also, if you don't want to waste paper, it's helpful to check how your page looks in **Print Preview** before you print, you can make some adjustments from there; others require that you go back to the worksheet page.