

instructional support

Enhancing Teaching and Learning through Technology

Using an Excel Spreadsheet for Grades

Why?

- Ease of inputting grades
- Use of formulas for automatic calculation of
 - point totals
 - dropping lowest score from total
 - averages
 - final letter grade conversion
- Easy import into other programs (WebCT, Web, etc.)

NOTE: There are imbedded macros in the sample files. If you have difficulty with their functionality follows these steps to correct the situation. Select **TOOLS** from the top menu, then **MACRO**, then **SECURITY**. Change the security level to **"MEDIUM"** and save. You will see a pop up window when opening the file, select **"Enable Macros"** and continue.

1	Term	Percentage Grade Master									
2	Class										
3	CRN #		5%	20%	30%	50%	5%	0%	0%	0%	
4											
5	Student Name		Attendance	Participation	Assignments	Tests / Quizzes	added column 1	added column 2	added column 3	added column 4	
6		Poss Pts	10.00	10.00	22.00	40.00	22.00	22.00	22.00	22.00	
8	1 Student 1		8.00	10.00	22.00	40.00	22.00	22.00	22.00	22.00	
9	2 Student 2		6.00	9.00	15.00	31.00	15.00	15.00	15.00	15.00	
10	3 Student 3		9.00	7.00	15.00	28.00	15.00	15.00	15.00	15.00	

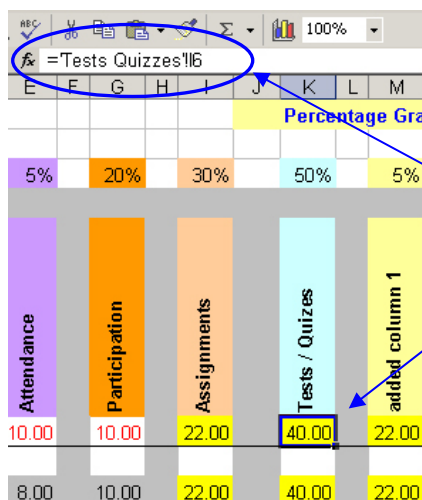
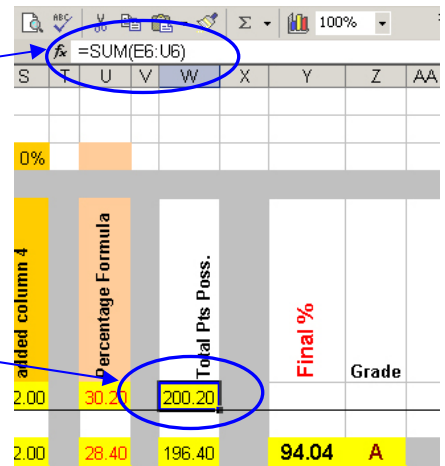
1. The grade summary page displays totals from other pages (yellow columns) and entry columns for single data items (ie Attendance, Participation).
2. DO NOT make entries in the yellow areas, they contain formulas which will be overwritten if you type in these cells.

10	3 Student 3				9.00	7.00	1
11	4 Student 4				10.00	5.00	1
12	5 Student 5				7.00	9.00	1

Areas requiring multiple entries can be tabulated on a separate page of the spreadsheet

3. What makes Excel so powerful is its ability to perform predetermined calculations, automatically. This is accomplished by developing formulas that do the work for you. Even though the template grade sheets provided are complete with formulas, it is important to understand how formulas work:

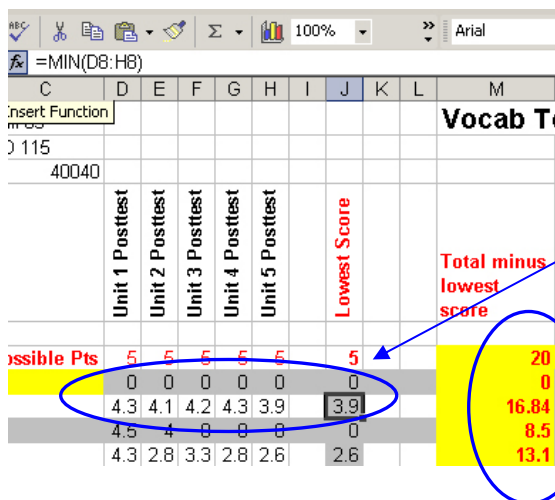
- All formulas begin with “=”
- Excel uses **numbered rows** and **lettered columns** for reference in formulas.
- The formula in cell W6 will SUM all contents of the cells in row 6 from column E through column U and display this total in Cell W6.



- The formula in cell K6 on the grade summary page displays a total from another page, the Tests / Quizzes tab.
- In this formula the “=” is first followed by the page name (which appears on the tab, it is case sensitive).
- Next is the “!” followed by the cell number you want displayed from that page.

- The formula on the grade summary page (above) refers to the total on the Tests/Quizzes tab in cell L6 of that page.

Quiz 4	Quiz 5	Totals	Possible Pts
10.00		40.00	
10.00		40.00	Student 1
9.00		31.00	Student 2



- In this example, the lowest grade is identified and displayed in column J for each student.
- The formula =MIN(D8:H8) looks for the lowest grade in the cell range D8 through H8.
- In column M, the formula =SUM(D6:H6)-J6 totals all entries between D and H and dropped J.

Excel formulas can perform simple or complex tasks.

- The formula to the right computes a grade percentage by dividing the total points possible with those earned by each student, then multiplying the sum by 100.
- Each student's percentage is displayed on column Y.

`= (U8/U$6)*100`

Percentage Grade Master									
Assignments	Tests / Quizzes	added column 1	added column 2	added column 3	added column 4	Percentage Formula	Total Pts Poss.	Final %	
2.00	40.00	22.00	22.00	22.00	22.00	30.20	200.20	94.04	
2.00	40.00	22.00	22.00	22.00	22.00	28.40	196.40	71.19	
5.00	31.00	15.00	15.00	15.00	15.00	21.50	142.50		

`=VLOOKUP(Y8,AE$8:AF$20,2)`

Percentage Formula	Total Pts Poss.	Final %	Grade
30.20	200.20		
28.40	196.40	94.04	A
21.50	142.50	71.19	C-
20.10	139.10	66.56	D
15.80	107.80	52.32	F
22.00	158.00	72.85	C-
0.00	0.00	0.00	F
0.00	0.00	0.00	F
0.00	0.00	0.00	F
0.00	0.00	0.00	F
0.00	0.00	0.00	F
0.00	0.00	0.00	F
0.00	0.00	0.00	F
0.00	0.00	0.00	F
0.00	0.00	0.00	F
0.00	0.00	0.00	F

Grading Scale	
0	F
60	D-
64	D
67	D+
70	C-
74	C
77	C+
80	B-
84	B
87	B+
90	A-
94	A
97	A+

To convert each student's percentage into a letter grade.

`=VLOOKUP(Y8,AE$8:AF$20,2)`

This formula uses the command VLOOKUP to search through a range bounded by AE8 and AF20 for a match on the left and assigns the letter grade on the right.

You can adjust the left side of this grid to fit your grading scale.

To maintain a proper ratio for grade tabulation, the columns for "Possible Pts" must only be filled in when you are ready to enter student scores.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
1		Term								Assignments								
2		Class																
3		CRN #																
					Assignments	Assignments	Assignments	Assignments	Assignments	Assignments	Assignments	Assignments	Assignments	Assignments				
4																		
5					1	2	3	4	5	6	7	8	9	10	11			
6			Possible Pts		4.00	4.00	5.00	3.00	6.00									
7															22.00	Possible Pts		
8	1	Student 1			4.00	4.00	5.00	3.00	6.00						22.00	Student 1		
9	2	Student 2			3.00	3.00	3.00	2.00	4.00						15.00	Student 2		
10	3	Student 3			2.00	4.00	3.00	2.00	4.00						15.00	Student 3		

There are three Grade Formats Available:

1. Total Points –
2. Percentage –
3. Lowest score out –

To begin working with your excel grade book, open the sample which best suits your needs.

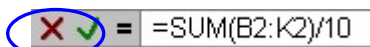
Entries for the Grade Summary page ONLY, the information will be updated on subsequent pages automatically

1. Enter the course information in the upper left corner.
2. Enter your student names (new students during the term should be entered at the end of the list to avoid formula corruption)
3. Customize the tabs for the multiple entry pages.
 - Right click the tab and "rename" (NOTE: when referring to pages in a formula, the reference is case sensitive)
4. Change the column name to match the tab name.
5. Change the page name to match as well.
6. Begin entering data by first entering the total for "Possible Pts"
 - Then complete entering each students score for that column.
 - REMEMBER – once the Possible Pts are entered, each student is being charged with the responsibility of achieving that total. If you do not enter their actual score, the summary will not reflect properly.

Some Common Formulas

Remember: a formula begins with "=". After typing a formula, press "Enter" or click on the green checkmark to accept the formula. (If you make a mistake, click on the red X to clear your changes.)

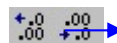
- =B2+C2+D2+E2+F2 (to add points)
- =SUM(B2:K2) (also adds points)
- =SUM(B2:K2)/10 (totals points & divides to find average)
- =AVERAGE(B2:K2) (same as above)
- =MIN(F2:H2) (to find the lowest score from those cells)
- =(SUM(F2:H2)-I2) (adds columns together, and subtracts the lowest score - in this case, "I2")
- =(E2*0.3)+(J2*0.7) (Weighted point values: Column E is worth 30% of the grade, column J is 70%.)



Decimal Points & Letter Grade

Be aware that letter grades are given based on the exact point value, including decimal points that you have rounded off. A grade of 79.6 will show up as "80" on the spreadsheet, but will be given a letter grade of "C" instead of "B". (e.g. L2)

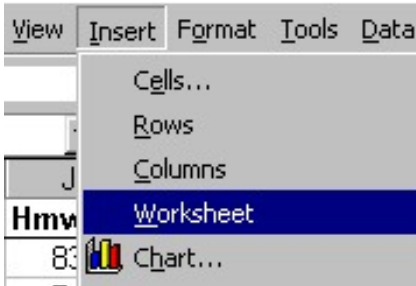
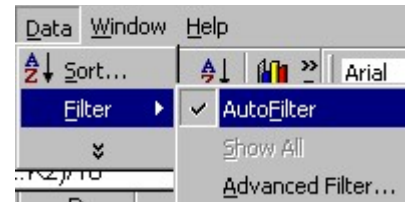
1. To see how this works, on "Sample 1", select cells L2 - L7.
2. Click on the button "Increase Decimal" to see the effect.



Filter Data

Here's a quick way to list all students scoring less than 70 points on an assignment:

1. Choose "Data – Filter – AutoFilter".
2. From the drop-down arrow next to any assignment, select "Custom".
3. Set your parameters, e.g. "Total Points – less than – 70".



Create your own

1. From the "Insert" menu, select "Worksheet". (or simply open a new Excel document.)
2. Double-click on the worksheet tab below to change the name.
3. Enter any appropriate column headings and data appropriate for your class. Try some style changes (bold, center, underlined border, etc.)
4. Try at least one type of formula to add columns, find an average, find a grade, etc.

