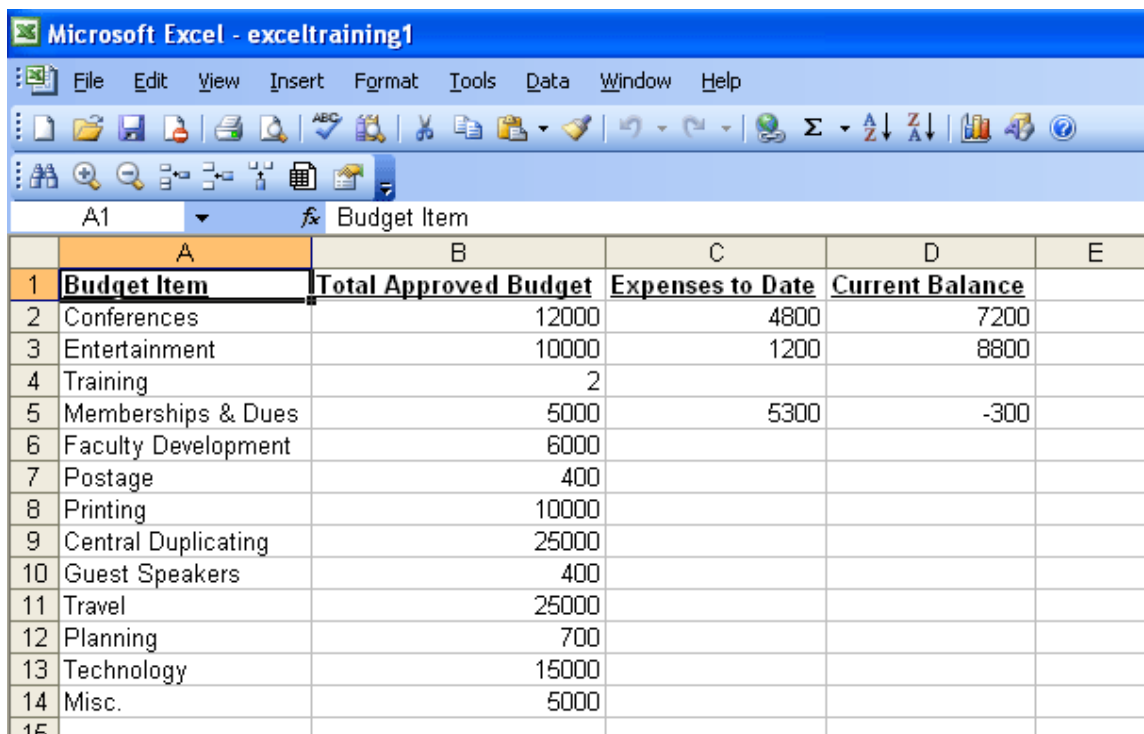


Excel Tips from June Workshops

Class 2: Working with numbers

Overview:

In this class, we built a department budget. We started with the framework we put together in the first class, which included a master worksheet with budget categories, approved budget, expenses to date, and a current balance for each category. We inserted a worksheet for every budget item (such as conferences, entertainment, training, etc.). We manually entered on the master sheet the total approved budget. Here's a snapshot of the master sheet:



	A	B	C	D	E
1	Budget Item	Total Approved Budget	Expenses to Date	Current Balance	
2	Conferences	12000	4800	7200	
3	Entertainment	10000	1200	8800	
4	Training	2			
5	Memberships & Dues	5000	5300	-300	
6	Faculty Development	6000			
7	Postage	400			
8	Printing	10000			
9	Central Duplicating	25000			
10	Guest Speakers	400			
11	Travel	25000			
12	Planning	700			
13	Technology	15000			
14	Misc.	5000			
15					

On each worksheet, we set up columns for the date, expense, and amount, as well as a place for the current balance. Here's a look at the framework we used on each worksheet:

The screenshot shows a Microsoft Excel window titled "Microsoft Excel - exceltraining1". The spreadsheet has the following data:

	A	B	C	D
1	Conferences	Current Balance:	4800	
2				
3	Date	Item description	Amount	
4	6/14/2007	APA Conference	600	
5	6/14/2007	IEEE Conference	500	
6	6/14/2007	ASHA Conference	600	
7	6/14/2007	Jesuit Communication	1500	
8	6/14/2007	Blackboard Conference	700	
9	6/14/2007	CAA Conference	900	
10				

We manually entered the date, the item description, and the amount. We let Excel determine the current balance for us. This helps prevent errors we may make trying to add a large column of numbers with a calculator. We used a **formula** to do the work for us.

Formulas:

A formula will do math for you. You will notice a bar somewhere above Column B usually that has **fx** in front of it. This is the formula bar. The key to starting a formula is the = **sign**. This tells Excel you are ready to begin a formula. To start, **click in the cell** where you want Excel to place the result of your formula. In this case, we wanted the formula in cell C1. This formula will add all of the numbers in the Amount area and put the resulting current balance in cell C1.

Once you've clicked in the cell, **type =**. After we typed =, we typed **SUM(**.

*Don't include the period, just SUM and then open a parenthesis.

After **SUM(** we **highlighted** all of the numbers beginning with C4 (the \$600 expense for the APA conference). We went beyond the last entry in cell C9, and kept highlighting until we reached row 100 or so. Though we only have entries in a few cells now, you will continue to rack up new items. Highlighting past the entries you currently have will allow Excel to take future entries into account. So when you enter something in row 10, the current balance at the top will automatically refresh.

After highlighting, hit **Enter** and you will see the result of your formula in the cell next to current balance. You will notice as you type the formula that it will also appear in the formula bar. See below for an example of this formula:

Microsoft Excel - exceltraining1

File Edit View Insert Format Tools Data Window Help

C1 Σ =SUM(C4:C93)

	A	B	C	D
1	Conferences	Current Balance:	4800	
2				
3	Date	Item description	Amount	
4	6/14/2007	APA Conference	600	
5	6/14/2007	IEEE Conference	500	
6	6/14/2007	ASHA Conference	600	
7	6/14/2007	Jesuit Communication	1500	
8	6/14/2007	Blackboard Conference	700	
9	6/14/2007	CAA Conference	900	

Formula to add a column of numbers

Formula bar

If you have made a mistake, click in the cell where you typed the formula. You should see the formula you typed in the formula bar. You can edit this formula by clicking in the formula bar and making changes.

Other formulas:

After we got a current balance on each worksheet, we needed to carry this information over to our Master sheet. Recall that the master sheet had an “Expenses to Date” column, which is where our current balance for each worksheet should go. We could simply re-type the balance, but this will mean every time the balance changes, we need to change the Master sheet. Also re-typing numbers can sometimes lead to errors. If we use a formula, we can bring the balance over to the main sheet, as well as have it update automatically whenever the current balance changes.

To copy over a formula, **click in the cell** where you want the formula to appear (the Expenses to Date column in our case):

	A	B	C	D	E
1	Budget Item	Total Approved Budget	Expenses to Date	Current Balance	
2	Conferences	12000	4800	7200	
3	Entertainment	10000	1200	8800	
4	Training	2			
5	Memberships & Dues	5000	5300	-300	
6	Faculty Development	6000			
7	Postage	400			
8	Printing	10000			
9	Central Duplicating	25000			
10	Guest Speakers	400			
11	Travel	25000			
12	Planning	700			
13	Technology	15000			
14	Misc.	5000			
15					

Then type = so that Excel knows you are beginning a formula. Then click the worksheet where your balance is (Faculty Development in this case).

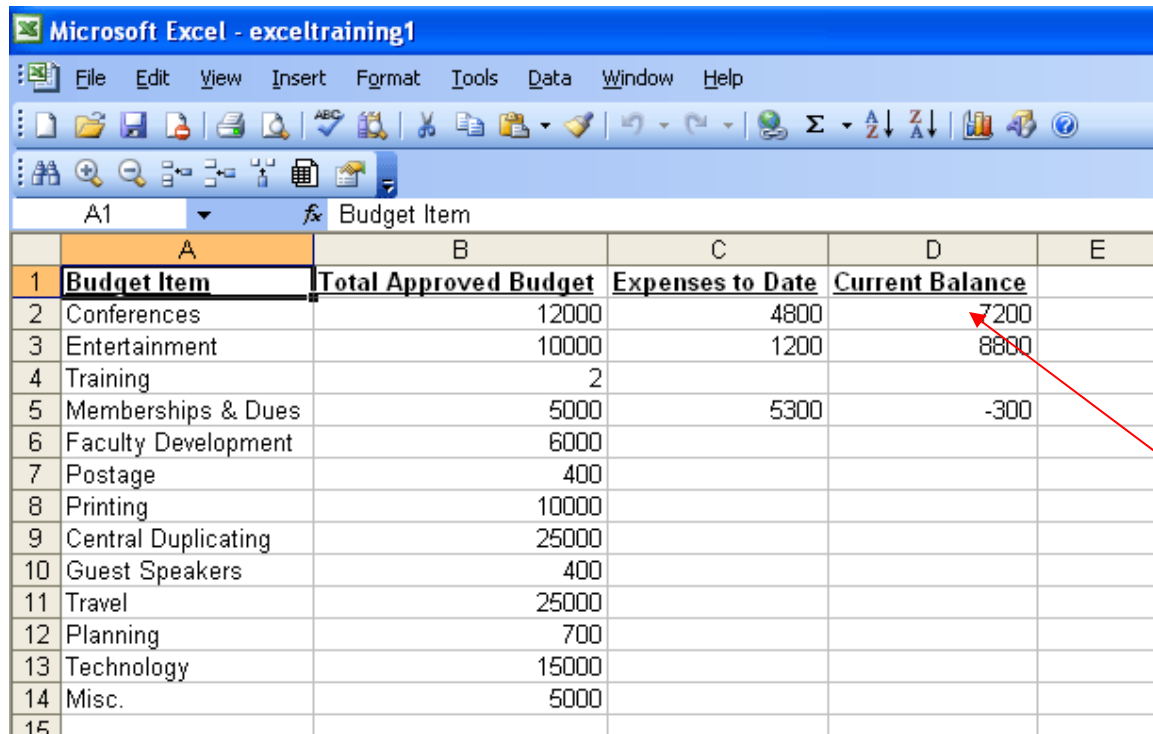
Master / Conferences / Entertainment / Training / MembershipsDues / FacultyDev / Postage / Printing

Then click in the cell where your current balance is.

	A	B	C	D
1	Conferences	Current Balance:	4800	
2				
3	Date	Item description	Amount	
4	6/14/2007	APA Conference	600	
5	6/14/2007	IEEE Conference	500	
6	6/14/2007	ASHA Conference	600	
7	6/14/2007	Jesuit Communication	1500	
8	6/14/2007	Blackboard Conference	700	
9	6/14/2007	CAA Conference	900	
10				

Then simply hit the Enter key on your keyboard. The formula will be copied over to your Master sheet. The Expenses to Date number will update each time you make a change to the corresponding worksheet, so there is no need to update the Master sheet whenever you add an additional expense.

We also did a formula to subtract expenses to date from the total approved budget to come up with a current balance on the Master sheet:



	A	B	C	D	E
1	Budget Item	Total Approved Budget	Expenses to Date	Current Balance	
2	Conferences	12000	4800	7200	
3	Entertainment	10000	1200	8800	
4	Training	2			
5	Memberships & Dues	5000	5300	-300	
6	Faculty Development	6000			
7	Postage	400			
8	Printing	10000			
9	Central Duplicating	25000			
10	Guest Speakers	400			
11	Travel	25000			
12	Planning	700			
13	Technology	15000			
14	Misc.	5000			
15					

To create this formula, **click** in the cell where the balance should go (cell D2 in the above example), and type =. Then **click** on the cell with the corresponding approved budget (cell B2 in the above example). Then type – and **click** on the cell with the corresponding expenses to date (cell C2 in the above example). Then hit **Enter** on your keyboard. The resulting formula will appear, and this formula will be updated for you whenever the expenses to date or total approved budget is changed.

In summary, the formula to add a column of numbers is:

=SUM() then hit Enter

The cells you want to add go in the parenthesis. After typing the left parenthesis, you highlight all of the cells you want to add and then close the parenthesis.

The formula to subtract two numbers is:

=cell your first number is in – cell you want to subtract from that number then hit Enter

After typing = simply click on the first cell, then type – and then click on the second cell and then hit Enter.

If you have any questions that were not covered in this handout, please feel free to contact Jessica Smith at jlsmith@loyola.edu or x2199.