



Intro to Microsoft Excel

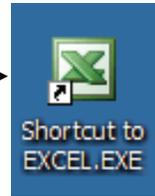
A spreadsheet is a computer program used to organize real world data, such as a rolodex or check register, that allows the user to easily maintain and access the information stored within it. Some advantages of a spreadsheet are that the user can "program" it to perform certain functions automatically (such as addition and subtraction) and its ability to hold almost limitless amounts of data (entire filing cabinets can be represented in a single spreadsheet). Once created, the spreadsheet can be quickly accessed, modified, and updated.

Today, we will be using Microsoft Excel 2003 to explore the program. Microsoft Excel 2007 looks different, but works the exact same way. If you have questions about Excel 2007, please let your instructor know

Microsoft Excel Components

Before you get started with Microsoft Excel (commonly referred to as Excel), you will need to locate and open it from the computer. It may be on your desktop.

From the computer desktop: Double-click on the Excel icon



Go to the Start menu if the Excel icon is not on the desktop:

Click ► **Start** ► **Programs** ► **Microsoft Excel***

*Occasionally, Microsoft Excel will be in a folder called “Microsoft Office” or similar – this will make one more step between “Programs” and “Microsoft Excel” in the diagram above.

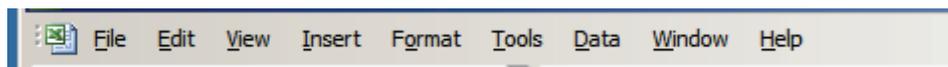
Excel will open a blank page called “Book 1.”

Using the Browser’s Titlebar

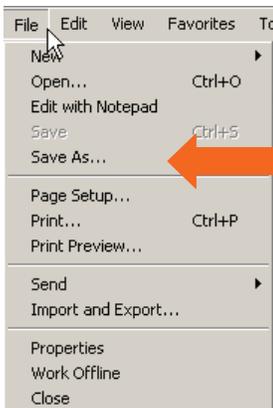


This is a close-up view of the Title Bar, where file information is located. Notice the default title “Book1.” You will get a chance to rename your spreadsheet the first time you choose to save it. Notice the three buttons on the right side, controlling program features. Remember that the X button on the far right means close the program, the middle button is a toggle switch between full screen and a small window, and the single line button on the left means minimize to the task bar.

The Menu Bar



The Menu Bar is a common site in almost all Microsoft Windows programs. It features text-based menus, on which are listed virtually every option available to the user in the entire program. Each menu expands when clicked (with the left mouse button), offering many options categorized by specific tasks.



You can click on each of the words to see a menu of the tasks you can perform.

To see a menu:

1. Point with your mouse to a menu option
2. Click the left mouse button once to open a drop-down menu
3. Point with your mouse to a particular item
4. Click once with the left mouse button to select the item

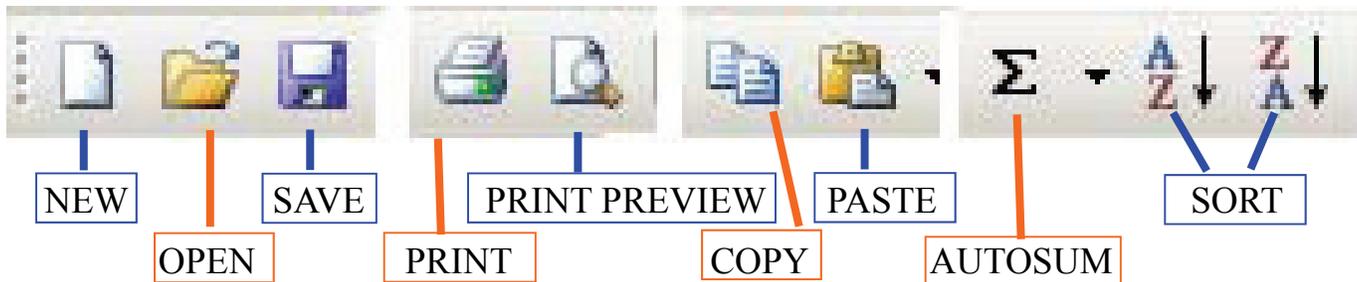
The Standard Toolbar



Toolbars provide “shortcuts” to commands also found in the Menu Bar. Toolbars are usually located just below the Menu Bar, and exist to offer another way to perform the same task. As with all Microsoft Windows programs, there are usually three ways in which to perform every task in order to suit the user’s preferences.

Remember, if you can’t remember what an icon stands for, hover your mouse over it and a box will pop up with the explanation!

The most commonly used commands in MS Excel are also the most accessible. Some of these commands are:



The Formatting Toolbar



The Formatting Toolbar offers options that can change the font, size, color, alignment, organization and style of the text in the spreadsheet and the individual cells. For example, (starting from the left side of the Toolbar) the “Arial” indicates the FONT of your text; the “10” indicates the SIZE of your text; and so on.

This toolbar works the exact same way as the MS Word Formatting Toolbar. The main difference is that the format changes will **only affect the selected cell or cells**, all unselected cells remain in the default setting (“Arial” font, size “10”).



Don’t forget about the special function keys on your keyboard!

The Equation Editor



The equation editor is generally found below the main toolbar. The left side denotes which cell is selected ("A1") and the right side allows you to input equations or text into the selected cell.

There are two ways to input information into a cell.

1. Select an individual cell and type the equation or text into the equation editor
2. Type the equation or text directly into the selected cell.

Equations (*=sum(D5+E5)*) will automatically be hidden inside the cell and can only be viewed through the equation editor while the result of the equation will be in the cell.

Note: If any written text is longer than the cell width, then the spreadsheet will cover up any portion longer than the cell width.

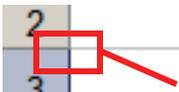
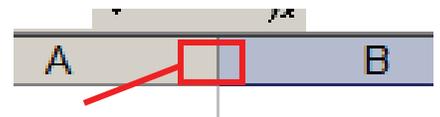
Want to **Copy and Paste** or
Undo and Redo like you do in Microsoft Word?
You can!
The same familiar options are available in Excel
for use anytime you need them!

Formatting Cells

Cells are the small rectangular boxes that make up the spreadsheet. All the information entered into an Excel spreadsheet is entered into the cells.

The cell **Width** and **Height** will usually need to be adjusted to view all the information entered into a cell

To adjust the cell **width**, move the mouse pointer in between two cell columns in the column header. Hold down the left mouse button and drag the mouse left to shorten the width or right to expand the width. Notice that all cells within the column are automatically adjusted.



Adjust the cell **height** using the same method. Move the mouse cursor between two rows, hold down the left mouse button and move the mouse up to decrease the height, and down to increase the height.

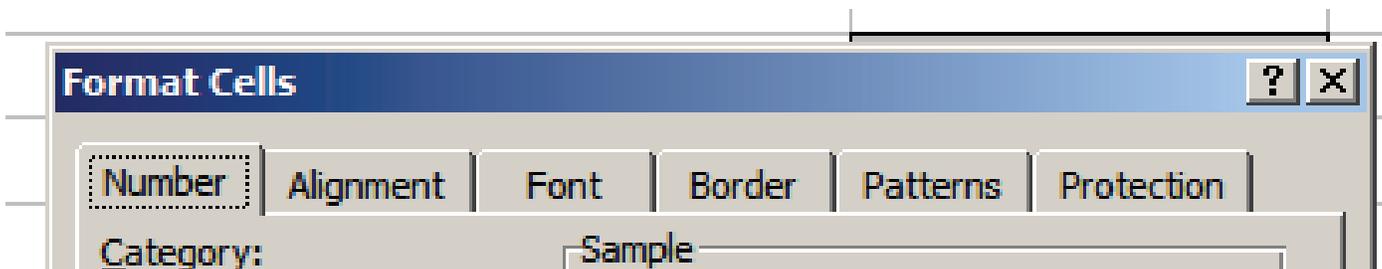
Formatting Cells, cont'd.

Before you begin entering data into a spreadsheet, you may already know what width and height you want your cells to have. In this case, you can adjust the widths and heights of all cells by doing the following:

Select the “square” between Column A and Row 1. This will select ALL the cells in the spreadsheet. Click **Format ► Row ► Height**. You will now be asked to enter a numerical value for “height.” Note that the default value is 12.75. Enter your own height value (10, 15, 20, 25, etc).

Repeat the same steps for Column width. Click **Format ► Column ► Width**. Note the default value for the width is 8.43. Enter your own width value (5, 10, 15, 20, etc).

For any given cell or selected cells, you can also format the way your data is represented within the cell(s). Select a single cell or multiple cells. Click **Format ► Cells**. The format window will now appear giving you a wide variety of options on how to format your cell.



Number - This allows you to choose how to represent the numbers that are entered into a cell.

Alignment - This determines how the data will be aligned within the cell (left-side, centered, or right-side).

Font - Select the type of font to be used within the cells.

Border - This option lets you choose what type of border, if any, you would like around the cells or part of the cells.

Patterns - This allows you to change the background color of the cell.

Protection - This option allows you to “lock” the cell information so that other users will not be able to make changes.

Individual Cells and Groups of Cells

To enter information (text, numbers, etc) into a cell, click in that cell and begin typing. To go to the next cell, you can use your arrow keys, mouse, or your **Tab** key. If you want to edit cell information, just click back on the cell to select it, then use the equation editor at the top to make changes.

The Formatting toolbar on MS Excel is exactly the same as the one used for MS Word. The biggest difference between the two is that for MS Excel, the format is set for each individual cell. Therefore, if you change the font, size and applied the bold option in cell C5, then this format will only be applied to cell C5. All remaining cells will remain in default mode until they have been changed.

Sometimes you may only wish to adjust the format of one particular cell. In this case, simply select the cell by clicking the mouse on it and make any necessary adjustments to the font, size, style, and alignment. Other times, you may wish to adjust the text format of a group of cells, entire rows, or entire columns.

Selecting a group of cells – Take a look at your spreadsheet and visualize which group of cells you wish to select. Remember, in MS Excel all selected cells must be connected creating some sort of highlighted "rectangle." Select the cell that would be the upper-left hand corner of your "rectangle." Hold down the **Shift** key on your keyboard and use the arrows on the keyboard to expand the selection of cells. You can also use your mouse to “click and drag” a selection.

Once the group of cells has been selected, you can make any necessary adjustments to the font, size, style, and alignment and it will be applied to all the selected cells.



Selecting an entire row – Sometimes you may wish to format the text of an entire row so that any data entered into the row, regardless of which column, will always look the same. Select the **Row Number** with your mouse and note how the entire row becomes highlighted. All text formatting changes are now applied to the entire row.

Selecting an entire column – Sometimes you may wish to format the text of an entire column so that any data entered into the column, regardless of which row, will always look the same. Select the **Column Letter** with your mouse and note how the entire column becomes highlighted. All text formatting changes are now applied to the entire column.



Inserting Rows and Columns

At some point, you may realize that you need to insert a row or column into your spreadsheet.

To insert a row, click on the row below where you wish your new row to be (remember to click on the row number to highlight the entire row). Right click your mouse and select the insert option. A new row will automatically be inserted and the row numbers automatically adjusted.

To insert a column, click on the column to the right of where you wish your new column to be (remember to click on the column letter to highlight the entire column). Right click your mouse and select the insert option. A new column will automatically be inserted and the column letters automatically adjusted.

Sorting Data

Once you have organized your spreadsheet and entered in some data, you may find it useful to sort that data according to certain criteria. Take a look at the checking account information represented:

8	Check No.	Date	Description	Amount Debit	Amount Credit
9		3/21/07	ATM	\$20.50	
10	1132	3/18/07	BellSouth	\$41.22	
11		3/1/07	Deposit		\$87.43
12	1123	3/7/07	Duke Energy	\$45.65	
13	1134	3/21/07	OWASA	\$45.98	
14		3/25/07	Pizza	\$22.43	
15		3/22/07	Top of the Hill	\$65.34	
16		3/4/07	Transfer Balance		\$230.43
17	1131	3/31/07	Whole Foods	\$34.99	
18					

MS Excel has the power to sort this information by either Check No. or Date (or any other Column Description). First, select all the cells that represent the data to be sorted, including the header descriptions (Check No., Date, Description, etc). You can do this using the keyboard, or clicking and dragging your mouse. For this example you want to select rows 8-17 and all the columns with information in them. The cells should look like this:

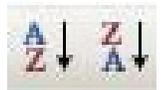
8	Check No.	Date	Description	Amount Debit	Amount Credit
9		3/21/07	ATM	\$20.50	
10	1132	3/18/07	BellSouth	\$41.22	
11		3/1/07	Deposit		\$87.43
12	1123	3/7/07	Duke Energy	\$45.65	
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Using your mouse, select **Data ► Sort** and the **Sort Window** should appear.

Now, select the column you wish to sort by (in this case, we have chosen "Date"). Do you want the dates to be in **ascending** or **descending** order? Once you select OK the checking account information will be sorted by the date of transaction.

If you do not have "column headers" (aka names at the top of each column) the "sort by" options will be the column numbers.

If you want to **sort an entire column**, you can also use your mouse to select the whole column (see page 6) and click the sort button - you choose which one by if you want ascending or descending. If there is other information attached to what you are sorting, it will prompt you to



decide if you want to "expand the selection". If you want your rows to stay intact (keep all the related information together) you click yes!

Auto Sums and Equations

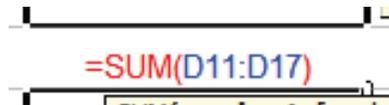
One of the most powerful features of Excel is its ability to perform basic math functions on your existing data. Excel can add, subtract, multiply, divide, find the average, and perform general counting functions on the numerical data you entered. To enable this feature, select an empty cell somewhere near the data for which you wish to perform a math function. This will be the cell where the “answer” to your math function will appear.

Select the **AutoSum** icon from the tool bar.



Note the difference between selecting Σ (which immediately initiates the Sum command) or selecting the \blacktriangledown symbol (which gives you a choice of which command you wish to initiate).

Within the selected cell, you will see an equation that looks something like this.



- **=** - denotes that you have started an equation for the cell
- **SUM** – tells you what the equation will do. In this case, the equation will add together the selected cells.
- **()** – parentheses contain the cells to which the math function will be performed.
- **D11** – this is the first cell to be included in the addition formula.
- **D17** – this is the last cell to be included in the addition formula.
- **:** - indicates that all cells in between the first and last should be included.

Usually, the spreadsheet will "select" the cells that it thinks you wish to include. But you can manually change the cell range by typing the desired cell range into the **Formula Bar** or using your mouse to select the correct cells.



Press **Enter** to execute the formula.

Other math functions you can perform from the AutoSum icon are:

- **Average** - This will calculate the average of the selected cells
- **Count** - This function simply counts the number of cells selected.
- **Max** - this function will return the highest value of the selected cells.
- **Min** - this function will return the lowest value of the selected cells.
- There are even more complicated functions that Excel can do - but most of us will never need to use them!

Remember - Excel equations are similar to programming languages, so have some patience and if at first you don't succeed - don't be afraid to try again. It is not uncommon for Excel professionals to create a wrong formula on the first try. Once you get an equation to work, you will technically be a programmer!

Printing Spreadsheets

To print your Excel document:

Click **File ► Print** from the Menu Bar and a print window will pop up on the screen.
Click **OK** for your document to start printing.

As with all commands in Excel, you can make changes along the way. From the **Print Menu**, you can alter how many copies will be made, in what order the pages will be and much more.

Other useful tools are the **Print Preview** function, found alongside the **Print** command, and the **Page Setup** function.

Print Preview will allow you to look over an exact copy of what will come out of the printer before actually executing the print command. .

Page Setup will allow you to select the page order in which multiple pages will be printed, the direction of the paper (often “landscape” is best for spreadsheets), and determine if the **Gridlines** should be printed or not.

Saving Spreadsheets

When you come to a stopping point and want to leave the computer or close the program, it is important to save your work (even if you are printing a hard copy — saving should be a reflex).

Click **► File ► Save** from the Menu Bar to get started.

You can change the filename that Excel has chosen just by typing a new one in the File name box at the bottom of the window that appears.

Excel will automatically save your document with the suffix “.xls” – this is simply a tag that lets Excel know that your work is specific to this program. You do not have to type it – just highlight what is there and write a new file name. (If you are using the newest version of Excel it will have the suffix “.xlsx”)

To bring a saved document back up on the screen from Excel:

1. Click **► File ► Open** from the Menu Bar.
2. Find where the file is located (which folder, that is) and click on the filename of the document you want.
3. Click **► Open**.

Finding Help

You can get help with MS PowerPoint by choosing **Microsoft Excel Help** or **Show the Office Assistant** from the **Help** menu on the main menu bar.

Tutorials are also available on the Internet. Your instructor can help you with locating some of these resources.