

# Step-by-Step: *Microsoft Excel*<sup>™</sup>

A user guide by New Tampa Technology.

## ***What is Excel?***

Microsoft Excel is a spreadsheet program. It is capable of performing many useful functions including calculating data, sorting and filtering information, and creating graphs and tables.

## ***Starting up Excel and creating a new file...***

Double click on the Microsoft Excel icon or (on a PC) go to Start-> Programs-> Microsoft Excel. A new empty file should appear in front of you. If not, go to File->New to open a blank workbook.

## ***Workbooks vs. Worksheets...***

In Excel, one file is a workbook which can contain many worksheets. On the bottom left of your Excel file, you will notice three tabs labeled “Sheet 1”, “Sheet 2”, and “Sheet 3”. These three sheets provide three clean spreadsheets in your workbook for you to work with. You may add or remove as many worksheets as you want.

## ***Menus in Excel...***

Most of the time, when you open a software application, you see several menus across the top of the screen. In Excel, you will generally see nine menus: File, Edit, View, Insert, Format, Tools, Data, Window, and Help. Try to think of the menus intuitively; usually the name of the menu is related in some way to the action you are trying to complete. Also remember that there is often more than one way to complete an action; there might be a menu command, a keystroke, and a shortcut on a toolbar below the menus.

**FILE MENU:** Includes commands that manipulate the file that you are working on such as create a *new* file, *open* or *close* a file, or *print* or *save* your work.

**EDIT MENU:** Includes commands that make proof-reading changes to your work such as *cutting*, *pasting*, and *copying* text, *deleting* information, or *searching* for and *replacing* entries.

**VIEW MENU:** Includes commands that help you to see your work in different layouts or to access parts of the program that are not currently visible such as *zooming* in on your work or viewing a *toolbar*.

**INSERT MENU:** Includes commands that put elements into your work that are not currently there such as adding a new *row* or *column* to your partially entered data, entering a predefined *function* to compute a complex calculation, and accompanying your work with visual elements like a *chart* or *clip art*.

**FORMAT MENU:** Includes commands that adjust the look of text or the numbering scheme such as increasing/decreasing *column width* or *row height* or changing the *cell* format to center, bold, or enlarge text or to hold a number to two decimal places.

**TOOLS MENU:** Includes commands that activate special built-in tools like a *spelling* checker or the program *options*.

**DATA MENU:** Includes commands that help you mathematically manipulate or non-permanently organize your data such as *sorting* your data entries in a particular order, *filtering* out unnecessary entries, or creating automatic *subtotals*.

**WINDOW MENU:** Includes commands that allow you to easily go between multiple open windows.

HELP MENU: Includes commands that let you ask how to do something you don't know how to do or search an index of help instructions. Use this menu often as you learn the program; instructions are usually clear and provide step-by-step help in a short amount of time.

### ***Three Cursors in Excel...***

THE CHUNKY WHITE CROSS – Appears most of the time. *Selects* and *highlights* cells.

THE ARROW – Appears as you move the cursor around the edges of selected cells. *Moves* the contents of cells to another location by clicking and dragging.

THE THIN BLACK CROSS – Appears as you move the cursor over the square in the lower right hand corner of selected cells. *Copies* the contents of selected cell to following cells by clicking and dragging. This EXTREMELY useful feature not only copies text or numbers, but also copies formulas and follows patterns.

### ***Entering your data...***

To enter in data in Excel, simply click on a square in the grid (known as **cells**) and begin typing. The information you are typing will appear in two places 1) the cell you clicked on and 2) the “Formula Bar” next to the equal sign at the top of the screen. The “Formula Bar” always shows the contents of the selected or active cell. To complete the entry, on your keyboard hit the return key (to move down one cell), hit the tab key (to move right one cell), or hit any of the arrow keys (to move one cell in the direction of the arrow). You may also use your mouse to click on another cell to complete your entry.

*NOTE: If the “Formula Bar” does not appear in the top portion of your screen, select View->Formula Bar.*

### ***Naming Cells...***

Cells are named by their column letter and row number, for example A1, C3, etc. It is helpful to use these cell names when writing formulas to calculate data.

### ***Editing your data...***

To replace the contents of the cell with new information, click the cell you wish to change once and type in your new information.

To edit existing information in a cell, you can 1) double click the cell you wish to edit and make appropriate adjustments or 2) single click the cell you wish to edit and click the “Formula Bar” to edit the text in that cell.

### ***Adjusting the size of your columns and rows...***

If your entered data exceeds the width of a column, go to the right boundary line of that column by the column letter. When your cursor changes to a cross with left and right arrows, click and drag to adjust the column width. Double-clicking on the right boundary line will automatically adjust the column width to be the size of the longest entry in that column.

If your entered data exceeds the height of a row, go to the lower boundary line of that row by the row number. When your cursor changes to a cross with upper and lower arrows, click and drag to adjust the row height. Double-clicking on the lower boundary line will automatically adjust the row height to be the size of the largest entry in that row.

### ***Creating a Formula...***

To calculate a number in Excel, select the cell where you want to see your answer. Type in your formula. Formulas MUST start with an equal sign. For example:

If you typed in “=3+5”, the number “8” would appear in the cell.

If you typed in “3+5”, the text “3+5” would appear in the cell.

If you typed in “=A1+A2” and the number 2 was in cell A1 and the number 3 was in cell A2, the number “5” would appear in the formula cell.

This last example is called *cell-referencing* and is useful because your calculations are automatically updated if you have to change your information. For example:

In the previous example, if you changed the contents of A1 to 15, the number in the calculation cell would automatically change to “18”.

### ***Using Predefined Formulas and Auto-Sum...***

Under Insert->Function... you will find a library of many predefined functions including average, sum, absolute value, etc. By clicking once on a function, you can learn about how to use the function. Double-click to insert the function in the selected cell.

Auto-sum is an extra special predefined function that lets you select a set of numbers you would like to add together, leaving one blank cell below or to the right of the selection. After making your selection, clicking on the auto-sum button (represented by the Greek letter Sigma) will result in the sum appearing in the previously blank cell.

### ***Formatting a cell...***

To make the contents of a cell bold or italic or to change the font face or font size of the text in a cell, simply select the cell or cells you wish to format and click on the B or I or the font face and font size drop down menus on the Formatting Toolbar, respectively. You can also select the appropriate cells and go to Format->Cells to make all kinds of cell formatting changes like rounding to a certain number of decimal places, adding a dollar sign to currency values, or placing a border around your cell. For charts, you might investigate the AutoFormat... option for preset, aesthetically-pleasing coloring, border, and font choices.

### ***Sorting data in Excel...***

Let's say you've just entered in 25 students names and now you want them in alphabetical order. Simple. Select a single cell anywhere within the entered data, go to the Data menu and select Sort...

In the Sort window, select the column you wish to put in order from the available drop down list (rows will move together so data will stay associated correctly). Select the ascending radio button for alphabetical order and the descending radio button for reverse alphabetical order. Click okay and watch the sorting magic.

### ***Graph in a minute...***

Remember this silly rhyme to make great graphs:

In order to make the perfect chart,  
the absolute most important part  
is selecting the “right” data before you start!

-Highlight the numerical data you wish to graph. Also highlight any text you wish to act as labels on your graph.

-Click on the Chart Wizard button, the blue, yellow and red bar graph located on your toolbar.

-In Step 1, select the type of graph you want to create. Click Next.

-In Step 2, click next (If you want to experiment with the series, you can. Most of the time, Excel guesses correctly on the way you mean to create the graph if you've done good “selecting”).

-In Step 3, label your chart title and axes. Make legend and axes adjustments on other “Tabs.” Click Next.

-In Step 4, click Finish to put the graph on the same page as your data. Click the radio button for “As a new sheet:” and click Finish to place your graph on a fresh blank worksheet.

PLEASE NOTE: Sometimes what looks pretty in terms of formatting is not the best for sorting or for graphs. For instance, leaving blank rows or columns will often times create a big blank space on a graph.

### ***Filtering data in Excel...***

Let’s say you’ve just entered in 100 student test scores and now you want to see only the scores in a certain range. Select a single cell anywhere within the entered data, go to the Data menu and select Filter->Auto Filter.

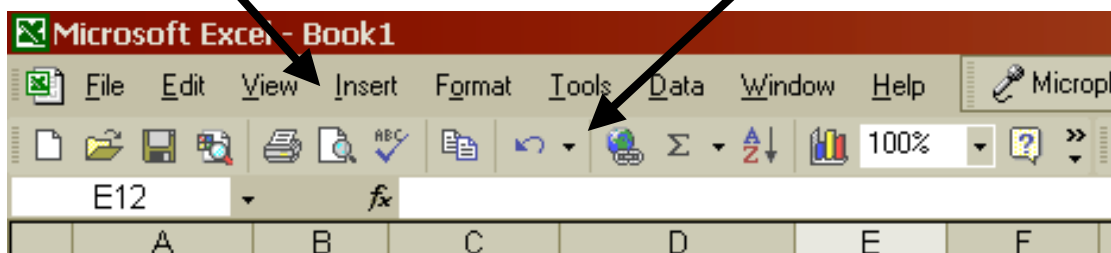
Select the arrow to the right of the field you’d like to filter and choose Custom Filter. In the Filter window, create a rule that filters out the unnecessary data. Click okay.

### ***File Format, Switching Programs, and Switching Platforms...***

If you want to use an Excel file between many versions of Excel or between a Mac and a PC, you might need to be concerned with the file format when you save your file. In the Save As... window under “Save As Type:” drop down menu, you can choose to save your work in an older version of Excel OR in the ultra flexible Tab-delimited Text format (formatting and functions not preserved) or in the .SYLK or .SLK file format (formatting and functions are preserved).

### **Menu Bar**

### **Standard Toolbar**



### **Formula Bar**

### **Formatting Toolbar**

