Microsoft Excel Basics

Introduction to Excel
Click on the program icon in Launcher or the Microsoft Office Shortcut Bar. A worksheet is a grid, made up of columns, which are lettered and rows, which are numbered. At the intersection of each row and column is a cell, which has a coordinate address called a “Cell Reference” (A1 or C5, etc.).

The Menu and Toolbar in Excel (see below) look much like the Word tools and most tools behave as you would expect.

Excel Help. Use Help on the Menu Bar or click on the ? icon on the Toolbar.

- Use Contents section to view specific categories of information.
- Use Index section to search an alphabetical arrangement of terms.
- Use the Assistant to search for a specific word or phrase.

Selecting Cells
To select a single cell -- click on it with the pointer.
To select a group of cells -- click on a cell and drag to select remaining cells.
To select a row of cells -- click on the number of the row.
To select a column of cells -- click on the letter of the column.

Moving from one cell to the next
- Use Tab key to move right to the next adjacent cell.
- Use arrow keys to move in any direction or within a cell.
- Use the mouse -- point to the cell you want and click the mouse button.

Spreadsheet Features
When you select a single cell, it becomes active with a heavy dark border around it. In the upper left-hand corner of the spreadsheet, you will see the cell reference for the active cell (A1 in the figure below). All typing enters first into the Formula Bar, which is to the right of the cell reference. When you press <Enter> all information typed in the Formula bar is entered into the active cell on the worksheet.
Entering Data
You can use copy and paste to transfer cell data. To paste just the cell value and not the formula, go to Edit > Paste Special, and select the “Values” box. One shortcut is to click the little box in the lower right corner of the active cell frame, and drag it across the columns or rows.

Another neat trick is to first select the range of cells into which you will enter data. This allows you to tab from one cell to the next within this range of cells. If you are entering data into three columns (e.g. B, C and D) when you reach column D, the tab key will automatically return you to the next row in column B.

Correcting a Mistake
If you are still in the formula bar when you realize that you have made an error, just delete backwards by pressing <Delete> or use your mouse to correct the mistake like you would in any word processor. If you have made a mistake in a cell that has already been entered into the spreadsheet, first click on the cell with the error. Then, click in the Formula Bar and edit the error. After you have finished editing, hit enter.

Freeze Panes
One way to view the data on a screen more clearly is to Freeze Panes. This makes the column headings and row descriptions remain in view when you scroll through a large sheet. This option is found under the Window Menu. Select the cell just below the row containing column headings and to the right of any column that contains row descriptions. Then, select Window > Freeze Panes. To turn off this feature, go to Window > Unfreeze Panes.

Formatting Cells
In addition to the basic formatting effects (Bold, Italics and Underline), there are several other formatting options in Excel. Slowly pass the mouse over the icons on the formatting toolbar to find the tools for Currency, Percent, Comma and Increase or Decrease Decimal places. These are the most common formatting tools used in Excel.

You can also select Format > Cells from the Menu Bar (or Right Click menu). You will find there options to format cells as dates or text, align or wrap text, merge cells, apply borders or shading, etc.
Conditional Formatting
Conditional formatting allows you to set special cell formatting when certain conditions apply (for example, format all values over $100 in red italics). Highlight the range of data you would like to include and go to Format > Conditional Formatting.

AutoFilter
Filtering data allows you to view the data that meets your chosen criteria. To filter your data, highlight the columns you wish to filter and go to Data > Filter > AutoFilter. Arrows appear at the top of the selected columns. Clicking on the arrow presents a drop-down menu with filtering criteria (preset as well as custom options).

Building a Formula
A formula is used to calculate results from some collection of data. The most common function is to sum a range of numbers using the common mathematical operations of addition (+), subtraction (-), multiplication (*) and division (/). Formulae can also be used to count data, average data, and perform more advanced functions.

To construct a sum for example, do the following:
1. Click on the cell that you want to contain the formula.
2. Press the equal sign (=) type “SUM(“ (without the quotes), which will notify EXCEL that you want to sum a range of cells.
3. Highlight the range of cells for which you want the sum. Type a “)”.
4. When you have the correct formula in the Formula Bar, click on the “✓” button or press <Enter>. The total is displayed in the cell.

An even quicker way to Sum a column or row is to click on the SUM icon (Σ) on the toolbar. Look carefully at the range of cells that are selected. If you want to select a different range of cells, simply click and drag the mouse over the range to select it.

Notice: When you click on the cell containing a total, you will see the formula in the Formula Bar. You can change a formula by clicking in the Formula Bar and editing as described earlier in “Correcting a Mistake”.

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<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Textbook</strong></td>
<td><strong>Quantity</strong></td>
<td><strong>Price</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
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</tr>
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<td></td>
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<tr>
<td>6</td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7</td>
<td><strong>Sub Total</strong></td>
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<td>$1,621.67</td>
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</tr>
<tr>
<td>8</td>
<td><strong>Sales Tax</strong></td>
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<td>6%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>9</td>
<td><strong>Total</strong></td>
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<td>$1,718.97</td>
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<td></td>
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</tr>
</tbody>
</table>
Copying Formulas (Relative and Absolute Referencing)
To copy a formula from one cell to another, the default is relative referencing. For example, if the simple addition formula “=(A1+B1)” is contained in cell C1, and is copied to cell C2, the formula would change to “=(A2+B2)” to reflect the new row. To prevent this change (to keep all or part of the formula the same when pasting elsewhere), you must add dollar signs within the formula. For example, when copying “=(A1+$B$1)” the cell address A1 will change relative to its new location when pasted to another cell, but the second part of the sum will always be the value in cell B1.

Creating a Chart
Use the Chart Wizard to present your data. Start by highlighting the range of data you would like to include and then go to **Insert > Chart**, or click the Chart Wizard icon in the toolbar. Then follow the four steps:

Step 1 – choose the type of chart or graph you wish to create
Step 2 – select the data range and the series names for your chart
Step 3 – title the chart and label the axes, as well as format the legend, gridlines, etc.
Step 4 – choose whether to place the chart in the existing worksheet or on a new page

Once you have gone through all four steps, click **Finish** to see the chart. Changes can still be made to any part of the chart by double clicking on the axes, series, labels, etc., or by using the Chart Formatting toolbar that appears when the chart is selected.
Preparing to Print

Page Setup
Margins, paper orientation, headers/footers and print size can be set from the File > Page Setup Menu. If a spreadsheet nearly fits on one page, it is usually preferable to select the “Print to 1 page wide by 1 page tall” option. This avoids a single column or a few rows printing on a separate page. On the Sheets tab, you can also choose to print the gridlines.

Multipage Sheets
Also on the File > Page Setup window in the Sheets tab is an option to select any column headings (“Rows to repeat at top”) or row labels (“Columns to repeat at left.”) that you want to print on subsequent pages if your spreadsheet is long enough to print on more than one page. You do this by first clicking in the Rows to Repeat and Columns to Repeat boxes on the Sheet tab then click on the rows or columns in your spreadsheet. You can also specify the print area in this window, which may be only a section of the full spreadsheet.

Print Preview
Always use Print Preview before printing a spreadsheet to verify that you will print only what you want to print, and that the printout will look the way you expect it to look on the page. You can set the margins and layout in this view. When you have finished adjusting the spreadsheet in Print Preview mode, click on the Close button to return to the spreadsheet for editing.

When you are sure the spreadsheet looks the way you intend, select File > Print from the Menu Bar and specify the printer you want to use. Spreadsheets can be printed in color to capture special details, such as red fonts for negative numbers, or colored bars or pie sections in charts.

Excel Resources
In addition to the Help menu available within Excel, visit http://office.microsoft.com/ for several tutorials and guides to Excel 2003.
Exporting Data and Charts to Word or PowerPoint
1. In Excel, select the range of cells or the chart you want to copy, then go to **Edit > Copy**.
2. Switch to the Word document or PowerPoint slide and click where you want to insert the data or chart.
3. Go to **Edit > Paste Special**.
4. Click **Microsoft Excel Worksheet Object** or **Microsoft Excel Drawing Object** to paste the data or chart as a picture that you can resize. By double clicking the object, you can also edit and reformat the data using the Excel functions and tools.

*For data, you can also choose to paste the selection as **Formatted Text (RTF)** or **Unformatted Text**. Formatted text will insert the data into a Word table, while unformatted text will insert the data as text separated by tabs.

Exporting Data and Charts to the Web
1. In Excel, select the range of cells or the chart you want to copy, then go to **File > Save As HTML**.
2. Follow the instructions in the Internet Assistant Wizard to create the data or chart as an HTML document that can be opened as a separate Web page or inserted into a Web page.

Importing Data into Excel
**From Microsoft Access**
In MS Access, go to File > Save As/Export… and choose “Microsoft Excel”

**From Quattro Pro, Lotus, and dBase**
In Excel, go to File > Open, select appropriate file format in the Files of Type box

**From Other Data Sources**
Data from other sources should first be saved as ASCII text files. Excel can then open these files using the Text Import Wizard.
1. Go to File > Open
2. Select “Text Files” or “All Files” from the Files of Type box
3. Click OK
4. The Text Import Wizard will appear.
5. Follow the instructions to convert the text into Excel format.