

Excel I -- Introduction

Objectives:

- Excel Layout
- Selecting Cells
- Entering data into cells
 - Text
 - Numbers
 - Dates and Time
 - Formulas
- Equations
- AutoSum
- AutoFill
- Moving Data
- Resizing Columns
- AutoComplete
- Sort Data
- Print Preview



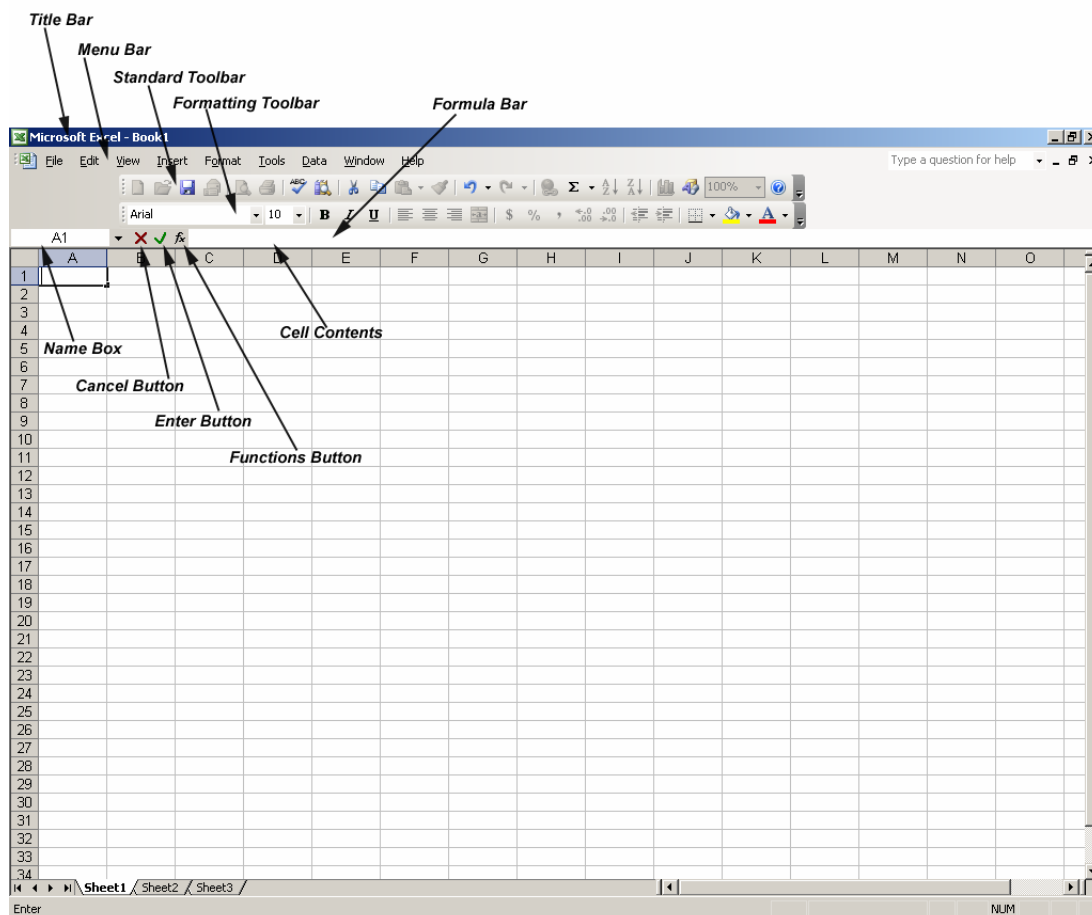
Task Pane: In Excel 2003 they added the Task Pane on the right to help with some functions. Click on the **X** in the upper right corner of the pane to hide it. You can click on **View→ Task Pane** to unhide it if needed.

Title Bar: Identifies the name of the program and displays the title of the document (if the document as been named and saved) and has the Minimize, Resize and Close buttons.

Menu Bar: Each word on the menu bar has a drop-down list with commands that give Excel instructions about what you want to do.

Toolbars: The Standard and Formatting Toolbars include icons for various tasks that you can perform. They are shortcuts to what is in the Menu bar.

Formula Bar: The left side of the Formula Bar has a Name Box, which shows the Column letter and Row number of the active cell. You can also use this box to give a name to a cell. The right side of the Formula Bar shows the contents of the active cell and can be used to edit the contents. The fx symbol can be used to insert functions. When entering data into a cell, the Cancel and Enter buttons appear.




Displaying all Toolbar Icons

There are two main sets of toolbars, the Standard Toolbar and the Formatting Toolbar. Some computers are set for both toolbars to share one row. When doing that, there is not enough room to show all the icons, and so it shows only the most recently used icons. To show all the available toolbar icons, click on **Tools → Customize**. Click on the **Options** tab. Click to put checkmarks into the line for “**Show Standard and Formatting Toolbars on Two Rows**”. Also check the line for “**Always Show Full Menus**”. Once you have done this on your computer at home, this will become the default and you will not need to do it again.

You can review what each icon does by holding your mouse cursor (without clicking) over each icon until the “**Tool Tip**” appears.

Selecting Cells

Before you place any information into a worksheet, you need to **select** the cell you want to use.

With the mouse cursor in the shape of a large white cross, , just click on a cell. That cell becomes the **active** cell. Excel indicates this by placing a border around the cell and by displaying the **cell address** in the name box. The **cell address** gives the exact location of that cell by giving its **Column Letter**, followed by its **Row Number**. For example, the cell address **C6** would indicate a cell in **Column C, Row 6**.

When selecting cells, you can also use the keyboard arrow keys to move around the sheet, selecting the **active** cell. Note that the **Column Letter** and the **Row Number** for the active cell are both highlighted in the margins.

Entering information

Select the cell you want to use and type your information. Excel displays your typed information on the right side of the formula bar. Accept the information by pressing the enter key, an arrow key, or clicking on the check mark on the formula bar.

Types of information you can enter

- Text
- Numbers
- Dates and times
- Formulas

Text

You can enter text to serve as labels in your worksheet. If the text is larger than the active cell, it overlaps the empty cells to the right of the active cell. If the adjacent cells contain other information, Excel hides the overlapping information in the worksheet but displays it in the formula bar when that cell is active.

Two methods of Editing a Cell

Click in the cell one time and edit the data on the right side of the **Formula Bar**, or **double click** in the cell and edit it within the cell itself.

Numbers

Numbers of all types can be entered into Excel and used in equations or formulas. These types include:

Format	Example
Integers	326
Negative integers	(326) or -326
Integers with commas	2,345
Decimals	3.26
Currency figures	\$326 or \$3.26
Percentage figures	32.6%

Entering numbers in a cell can be done using the numbers across the top of the keyboard, or using the numbers on the 10-key pad with **Num Lock** turned **ON**.

Note that **text** is aligned to the **left** of the column, while **numbers** are aligned to the **right**. When you mix numbers and letters, such as in a telephone number, Excel recognizes the entry as **text**. Whenever you enter a number that will not be used in any mathematical equation, (for example a **Zip Code** or **Social Security Number**) it is best to enter it as **Text**. You can do this by entering an **apostrophe (')** before the number. The apostrophe will not be displayed.

Dates and time

Excel recognizes a variety of date formats including:

12/1/07

4-Dec-07

Dec-07

15/Oct

You can use either – or / to separate months, days, and years

Excel recognizes the following time formats:

12:15 PM 12:15:06 PM 4:30 15:00 (Military time)

You must insert a space to separate AM or PM indicator from the time.

Excel right-aligns date and time entries since they are considered to be **numbers**.

Entering Formulas

All formulas must begin with an equal sign =.

Mathematical Operators

Operator	Operation
^	Exponentiation
/	Division
*	Multiplication
+	Addition
-	Subtraction

Excel performs calculations according to its **Operator Precedence**. First it will do exponentiation, then it will divide and multiply, and finally addition and subtraction. If you need to overcome this order, you must use parentheses, since calculations within parentheses are always evaluated first.

Example: $=2+2*6$ will give you an answer of 14. If you want 24, then you enter the formula as $=(2+2)*6$ Excel will add the 2's and then multiply.

Creating a Formula

You can enter a formula in several different ways. The first is to write the formula to include the cell addresses. For example, select a cell where you want the answer displayed, then type in a formula such as $=(F21-G21)*F19-F20$ and press the **Enter** key. This formula would subtract the value of cell **G21** from the value of cell **F21**. Then it would multiply this amount by the value in cell **F19**, and finally subtract the value of cell **F20**.

The second method is to create the formula in a similar fashion, but instead of typing in each cell address, you just click on the cell as it comes up in the formula. Excel will enter the cell address for you. For example, you could select the cell where you want the result displayed, then type in the **equal sign (=)**. This starts the formula. Then type in the left parentheses (and then click in cell **F21**. Next type the minus sign -. Then click in cell **G21**. Then type the right parentheses. Next type the asterisk *. Click in cell **F19**. Then type the minus sign – and then click in cell **F20**. To finish the formula, press **Enter**. As you create the formula, you can see the formula being spelled out in the right side of the Formula Bar.

Calculating a sum


You can enter a formula for a sum in several different ways. The first is to write the formula to include the cell addresses. For example, you could select a cell, then type in a formula such as $=F19+F20+F21$ and press the **Enter** key.


The second method is to start the formula by typing an **equal sign (=)**, then click on a cell to be added, type a **plus sign (+)** then click on the next cell to be added, etc. until you have all the cells. Press **Enter**. This allows you to simply select cells instead of typing in their cell addresses.

AutoSum

The toolbar button that allow you automatically add all the numbers in a range of cells. This is the easiest way to add a column or row. Click in a cell to make it the active cell. Click on the **AutoSum** icon Σ on the toolbar. It will automatically select the column of figures above the active cell, showing a dotted box around them. If there are no numbers above, it will select the row of numbers to the left. If you want different cells than it automatically selects, you can click your mouse and drag to select the desired cells. Press the **Enter** key. This speeds up inputting sums since the computer selects the cells for you.

AutoFill


Allows you to duplicate an entry or create a series of entries across a row or down a column. On the lower right corner of the active cell border there is a small square. This is called the **fill handle**. Move your mouse to the lower-right corner of the cell border, directly over the fill handle. Your cursor will change to the **AutoFill** cursor . Click on the **fill handle** and drag it down or up if you want to fill a column, or to the right or left to fill within a row. For most entries, it will duplicate the contents of the original cell into all the other cells. For certain words, such as Month or Weekday names, or Quarters 1 through 4, it will create a series. Or if you selected two numbers in adjacent cells, such as 1 and 2, it will create a series continuing the numbers 3, 4, etc.

Immediately after doing an **Autofill** operation, Excel will display the **Auto Fill Options Tag**  at the end of the fill. If you want to change the type of fill, click directly on the **smart tag**, then choose either **Copy Cells** or **Fill Series**. Note: The **Auto Fill Option Tag** will disappear as soon as you do some other operation.


Relative cell references for Formulas

For formulas, **AutoFill** will adjust the cell entries according to the **relative** position of each cell. For example, if the original cell was in **row 6**, and the formula referred to cell **D6**, filling the formula into **row 7** would have the formula refer to cell **D7** instead of **D6**.

Moving Data

Any active cell(s) can be dragged to a new location. Locate your mouse cursor anywhere around the **border** of the active cell (but **not** on the **fill handle**). The cursor shape will change to the **Move** cursor . Click and hold down the mouse button and drag the cell to the new location and release it. You can also drag a whole area of data by selecting several cells, then using the Move cursor to move the entire area. The cell addresses used within formulas will be automatically updated to the new addresses, depending on the relative position of the cells.

Resizing Columns

When you enter text that is too wide to be displayed in a column, the text will display in the cell to the right only if that cell is empty. If the right-hand cell is not empty, then the text will be truncated to show only what fits within that column. To resize the column move the cursor into the gray header area on the top margin. Move the cursor over the line on the right side of the column. The cursor changes to a double sided arrow . Hold down the left mouse button and drag to the right until the entire name is shown. You can also double click on the line between the two columns and it will automatically widen enough to show the longest entry in the column.

The display of numbers works differently than text. If you enter a number that is longer than the width of the column, Excel automatically widens the column to accommodate the entry. If you resize the column to make it narrower than the entry, then Excel displays the value in scientific notation. A value expressed in scientific notation is shown as a number between 1 and 9 raised to a power of 10. For example 10,000,000 as 1E+7. If the column is not wide enough to accommodate scientific notation, it displays a series of pound signs (#####) as a warning. You can use the same methods to widen the column as explained above for text.

AutoComplete

This handy feature speeds up the entry of repetitive text in a worksheet. **AutoComplete** attempts to finish the entry for you. It searches the previous entries in the column looking for similar text. For example, if there was the name **Scottsdale** somewhere directly above where you are entering text, as soon as you type an **S**, Excel would put in the rest of the name **Scottsdale**. Just hit **Enter** to accept it. If you do not want the same name, then just keep typing the name that you really want. Hit **Enter** when you have completed the entry.

Pick from a List of Entries

Similar to AutoComplete; the **Pick from Drop-Down List** feature allows you to display a list of all current entries in a column. You must be in the cell directly below the list of entries. If there are any blank cells separating the existing entries and the current cell, the list is empty. For example, if you wanted to insert a name into a cell and you knew the same name was used above, then **Right click** in the cell. Excel displays a short cut menu. Click on **Pick from Drop-Down List** and then click on the entry you want.

Sorting Data

A handy feature in Excel is the ability to sort data into alpha-numerical order or by date. Click on any cell in an Excel table. Now click on menu items **Data → Sort**. The Sort window appears. It allows you to sort by any column. Under **Sort By** click to select which column(s) to sort by. Note that Excel will automatically determine if a table has a Header Row, which is not to be sorted. Click on **OK**.

Selecting Rows & Columns

You can select an **entire column** by clicking on the letter at the very top of the column. Similarly, you can select an **entire row** by selecting the row number. You can select the **entire worksheet** by clicking on the blank cell in the top left corner, to the left of the column letter A and above the row number 1.

Cell Formatting – Borders and Colors

You can put a border around any part of a cell or group of cells. First select the cell or group of cells you want to format. Click on **Format → Cells**. Click on the tab for **Border**. Select a line style from the Line Style box at the right, then click within the Border box to select which borders you want to add.

You can also fill a cell or group of cells with any color. First select the cell or group of cells you want to format. Click on **Format → Cells**. Click on the tab for Pattern, then select the desired color.

Print Preview

Before you print out an Excel worksheet, it is best to use Print Preview to see if it will print the way you want it to. Click on the menu items **File → Print Preview**. Sometimes only part of the spreadsheet will print on the first page. Click on **Next** to see any additional pages. You might want to revise the layout of the page before you print it. For example, if the worksheet is wider than it is tall, it will look better on a sheet if printed in **Landscape** orientation instead of **Portrait**. Click on the **Setup** button at the top, and the **Page Setup** window will appear. Be sure you are on the **Page** tab. Here you can change the **orientation** from **Portrait**


to **Landscape**. Click on **OK**. The table will be printed with the paper rotated to better fit the wide table on the page.

Rename a Sheet

When you open a new Excel Workbook, it automatically starts with three worksheets, named Sheet 1, Sheet 2, and Sheet 3. You can rename the sheets to make it easier to know what each one is for. Just **Right click** on the sheet tab, such as **Sheet 1**. Click on **Rename** from the shortcut menu, Excel highlights the name. Type in the new name, such as **Members**. Excel overwrites the old name with the new name. Press the **Enter** key.

If you want to print the gridlines, click again on the **Setup** button at the top. The **Page Setup** window will again appear. Now click on the **Sheet** tab. Click to put a checkmark in the **Gridlines** box, just below the word **Print**. Click on **OK**. You can see that the gridlines will now print. Click on the **Close** button at the top to get back to the normal spreadsheet view.

Merge and Center Text

Table heading often look best when centered above the table. This is made easy by using the Merge and Center icon. Just type a table heading in a cell above the table. Then select all the cells directly to the left and right of the heading until you have selected from the left edge to the right edge of the table. Click on the Merge & Center  icon. The title will move to the center of one large cell that extends over the top of the chart.

Homework


*Recommended before you take **Excel II -- Intermediate**.*

Open the Excel program to an empty spreadsheet. **Rename** the sheet tab (Sheet 1) to be **Checkbook**.

Click on A2 and type **My Checkbook**.
Format A2 with font size **14** and font style **Verdana**.

Click on A5 and type **Entry #**.
Click on B5 and type **Date**.
Click on C5 and type **Description**.
Click on D5 and type **Amount**.
Click on E5 and type **Deposit**.
Click on F5 and type **Balance**.
Click on F6 and type **3000**.

Widen the cells to accommodate the text in the cells.

Select cells A5 – F5 and center the text using the **Center Align** button  on the toolbar.

Click on A7 and type **245** and hit Enter.
Click on A8 and type **246** and hit Enter.
Select both cells A7 and A8. Use the AutoFill handle drag down to A16. You should get then numbers **245** through **254**.

Select cells B7 thru B16

On the menu bar choose Format → Cells. Select the Category Date. Select Type 3/14/01, and click **OK**.

In B7 type in a date.

In cell C7 type **Pension Check** in cell E7 **2000**.

In cell B8 type in a date.

In cell C8 type **Electric Bill** and in Cell D8 type **45**.

In cell B9 type in a date.

In cell C9 type **Food** and in Cell D9 type **75**.

In cell B10 type in a date.

In cell C10 type **Phone Bill** and in D10 type **62**.

In cell B11 type in a date.

In cell C11 Right click the cell, then select "**Pick from Drop-Down List**" and choose **Food**.

In D11 enter **85**.

In cell B12 enter a date.

In cell C12 Type **Rebate Check** in cell **E12** (not D12) type **15**.

In cell B13 type in a date.

In cell C13 Type the letter **F** (note the word food comes up in the cell) press the right arrow key.

In cell D13 type **65**.


In cell B14 enter a date. In cell C14 type **Cable**, in Cell D14 type **99**.

In cell B15 enter a date. In cell C15 type **Water**, in Cell D15 type **125**.

In cell B16 enter a date. In cell C16 type **Visa**, in Cell D16 type **225**.

In cell F7 create a formula that will add F6 plus E7 and then subtract D7. Don't forget to start with an equal sign **=**. Cell **F7** should then display the number **5000**.

Click again in F7 to make it the active cell. Use the **AutoFill** handle and drag down to cell F16 to extend the formula in F7 (balance) down to cell F16.

Click on **Column A** in the header. With the entire column selected, click on the **Center Align** button  on the toolbar. This will make all the entry numbers centered in their cells.

Resize the columns that need resizing.