This training is intended to provide you with the knowledge base that you need to use Microsoft Excel for day-to-day applications.

**Worksheets**

Worksheets are the pages that are used in an Excel workbook. Each Excel workbook opens with 3 worksheets. Worksheets allow you to have multiple spreadsheets related to one subject in one document. You will find the worksheet tabs at the bottom of the document.

- **Renaming a Worksheet**
  - To rename a worksheet, double-click on the worksheet name from the tabs at the bottom of the document.

  ![Worksheet Tabs](image)

  Once the worksheet name is highlighted, you can simply type over it to rename the sheet.

- **Adding New Worksheet**
  - There are times that you may wish to have more than three worksheets in your workbook. Not a problem! Simply go to the **Insert** menu at the top of the page, and then choose **Worksheet**. (If you do not see this option immediately, click on the double arrow at the bottom of the Insert menu to display the remainder of your options.).

  ![Insert Menu](image)

- **Changing the Color of the Worksheet Tabs**
  - Microsoft Excel allows you to customize each worksheet. You can change the color of a worksheet tab by right-clicking on the worksheet tab, and then selecting **Tab Color**. 

  ![Tab Color](image)
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Adjusting Columns and Rows
- Adjusting Column Width and Row Height
  - To adjust the width of columns or rows, the easiest way is to move your cursor to the line between two columns or rows. You will know you can resize the column or row when your cursor turns into a double arrow.

Once your cursor is a double arrow, just click and drag to enlarge or shrink down a column or row.

  - If you have already entered information, but notice that a column is not wide enough to accommodate the information there is a quick and easy way to adjust the width to the perfect size.
  - Move your cursor to the same location as described above.
  - When your cursor changes to the double arrow, instead of clicking and dragging, simply double-click.

- If you want to change the size of all columns and/or rows the first step is select all cells.
  - To select all cells, move your cursor to the small square that is found directly above Row 1, and to the left of Column A, and click one time.
  - Once you click, all cells will then be selected. You can then repeat the steps from above to resize 1 column or row, but the changes will affect all columns or rows.

- Add/Remove Columns and Rows
  - If you have a spreadsheet, but realize after you have entered your data that you really need one extra column between two you do not need to move all of your information. Just enter a new column.
  - First, click the column letter to the right of where you want the new column to appear (this will select the entire column).
  - Next, either right-click and select Insert, OR go to the Insert menu and choose Column.
  - This process will also work to add a new row. The new row will be inserted above the selected row.
• Hiding/Unhiding Columns and Rows
  o Occasionally you will enter information in a column or row that needs to be there, but that does not need to be displayed all of the time. For these instances, it is best to hide the column or row, and then unhide it when you would like to see it again.
  o To hide a column or row, right-click on the column or row title (either the letter for columns, or the number for rows), then select **Hide** or **Unhide**.

Cells
• Merging Cells
  o Often when entering a title in a spreadsheet document, we want the title to appear in the center of the cells that will have information in them. The best way to do this is by using the **Merge and Center** function.
  o To merge and center cells, first click and drag to highlight all of the cells that you want the text to be centered in.
  o Next, click the **Merge and Center** button from the toolbar.

• Moving Information from a Cell
  o There are several ways to move information from one cell to another, but the easiest is to click and drag.
  o To move information from a cell you must first click to select the cell you would like to move (click and drag over several if you want to move more than one).
  o Position your cursor over the bold black border that is around the selected cell(s). This will turn your cursor into a moving tool. You will know your cursor is in the correct position when it turns into four arrows.
  o Click and drag the cell(s) to the new location on the worksheet.

• Filling Down a Column or Row
  o Many times we enter information in a spreadsheet that has a pattern. For instance numbering cells, or entering a formula that carries the same pattern throughout a column or row.
  o For these instances Microsoft Excel provides a function that helps dramatically.
  o Once you have entered your information in about 3 cells of a column or row (if they have a set pattern), click and drag to select the 3 cells.
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- Position your cursor over the lower right corner of the selection. You will notice a small square in this position. This is where your cursor needs to be. You will know that you have your cursor positioned correctly when it changes into a plus sign.
  - Once your cursor is a **plus sign**, **click and drag** down (or to the right for a row) to the ending position for the pattern.
  - Excel will then figure out your pattern and apply it to the remainder of the cells that you selected.

- **Setting the Format of a Cell**
  - Sometimes entering numbers in Excel and getting them to display correctly can be difficult. Particularly if you want zeroes showing at the beginning of a number, or you want dates to display the same way in all cells.
  - The best way to ensure that information is displayed correctly is to Format cells.
  - In order to format cells first you must select the cells that you wish to format.
  - Go to the **Format** menu and choose **Cells**.
  - If you want a number to display with leading zeroes, choose the **Text** category and select **OK**.
  - For some cell formats there are multiple options. For example, if you would like a cell to display in date form you must first select the **Date** category, and then you must choose the **Type** before selecting OK.
  - You can also change the background color of a cell or add borders around cells by using buttons found on the toolbar (See below).

**Sorting Information**

- Many times we enter information into a column that needs to be in numerical or alphabetical order. Even if you have already entered information that pertains to a topic or person next to the column you want to sort it is not too late.
- In order to sort information you must first select the cells that you want to sort. It is best to select an entire column or row by clicking on the column letter or row number.
- Once you have the information selected, click the sort button from the toolbar.
Formulas

- **Finding the Sum of Selected Cells**
  - Excel is very helpful with numbers. Excel can be set to add, subtract, or average certain cells. To find the sum of a column of numbers, click a cell below the column. For example, if you want the sum of cells B5-9 to display in cell B11, select the cell B11. Next, click the **AutoSum button**.
  - Once the AutoSum button is clicked, Excel guesses which cells you want included in the sum. It selects the cells by showing a box around the cells. If the “wrong” cells were selected, you can modify the selection by clicking and dragging to make a box around the appropriate cells.
  - Press **Enter** on your keyboard to set the formula.

- **Averaging Cells**
  - Finding the average of cells is very similar to finding the sum of cells. First, select the cell where the average is to appear. Then, click the small arrow that is next to the AutoSum button.
  - Click the **Average** button.
  - Next, select the cells to be averaged by clicking and highlighting those cells.
  - Press **Enter** on your keyboard to set the formula.
  - The same steps will apply to entering any other basic formula.

- **Entering Your Own Formula**
  - **Basic Formula Rules**
    - Every formula entered in Excel must start with an **Equal sign**.
    - Every cell must be identified by column and row (in that order).
    - If you want to set a range of cells use a colon to identify that you want all cells between two included.
      - Example: B2:B10 signifies to Excel that you mean cells B2 through cell B10.
    - Use + for addition, - for subtraction, * for multiplication, and / for division.
    - Words are used to perform certain functions. To see a list of functions go to the **Insert** menu and choose **Function**.
If you want to write a formula for figuring the sum of one set of cells, and then subtracting the sum of another set of cells you could use the following formula:

\[ \text{SUM}(B2:B10) - \text{SUM}(C2:C10) \]

Excel also allows you to use date from another worksheet of your workbook.

To pull data from another worksheet into a formula, identify it in the formula by using ‘SheetName’!Cell.

There are many capabilities of the functions that can be performed in Microsoft Excel. For more information on functions, visit the Microsoft Office Excel site at [http://office.microsoft.com/en-us/excel/default.aspx](http://office.microsoft.com/en-us/excel/default.aspx) and then searching for functions.

### Charts

- Excel has a fantastic capability of translating data into charts and graphs through the **Chart Wizard**.
- First, highlight the information to be included in the graph.
- Then click on the Chart Wizard button (looks like a bar graph). The Chart Wizard will walk you through creating a graph.
• The first screen that appears allows you to select the type of graph you wish to create. If you want to create a bar graph, select the first choice, and then click Next.

• On the next screen, you will see a preliminary graph of the data in the selection. You can choose to create the chart from the information in the rows of your spreadsheet or the information in the columns. Simply click the option and it will show you a preview of the chart. Once you have decided on your options click Next.

• Next, you will be able to edit the titles on your chart. You can title your chart, the x axis (bottom of graph) and y axis (left side of graph).

• There are also other options on this menu. Click on the tabs at the top to see your different choices. Once you have made your selections click Next.
On the next screen, you can either choose to include the graph as an object on an existing sheet or on a new one. Click **Finish**, and the graph will display on the sheet. If you want the graph in a different location on the sheet, just click and drag the chart to a different place on the sheet.

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**Print Area**

- Before you print a selection in Excel, you need to let the program know which area you would like to print. If you want to print all of the information you have input, just click and drag to highlight all of the content on the page.
- Next, click **File** in the menu bar, then **Print Area**, last click **Set Print Area**.
Print Preview

- It is usually a good idea to preview a spreadsheet before printing to be sure that the information is displaying on the page the way that you want it to (and not spilling over into other pages with just a little information).
- To preview a document go to the File menu and choose Print Preview.
- On the Print Preview screen you may wish to adjust the margins on the page. To do this, click the Margins button.
  - You are then able to click on the margins that are displayed on the page and drag them to the desired location.
- When you are finished with the Print Preview screen, click Close.

Printing a Spreadsheet

- When you print a spreadsheet in Excel you have the option to print with or without gridlines. Go to File then Page Setup. Click on the Sheet tab and you will see a small checkbox located next to Gridlines. If you want gridlines to appear on your sheet make sure the box is checked. If you do not want gridlines on your sheet make sure that the box is cleared. Last, click print and your item is complete!
Creating and Printing Mailing Labels from an Address List in Excel

- Microsoft Word allows you to mail merge from data in an Excel Spreadsheet.
- In order for the mail merge to be successful the data must first be entered into Excel in a set format.
  - Column headers must be used that clearly identify the type of data that is in each column (First Name, Last Name, Address, City).
  - Do not include any blank rows or columns within the information.
  - Save your workbook.
- Open Microsoft Word
  - Go to the Tools menu, and under Letters and Mailings select Mail Merge.
  - The Mail Merge wizard will open to the right of the Word document.
  - Follow the prompts in the wizard to merge the documents.

Office Online Templates

- There are many Excel templates available to you through Microsoft Office Online. To view the templates go to File and select New. From the task pane on the right side of the screen select Templates on Office Online.