

Excel 2016 Intermediate for Windows

Excel Intermediate Training Objective

To learn the tools and features of Excel 2016, and gain vital skills to use Excel more efficiently and effectively.

What you can expect to learn from this class

- How to create and edit Links in Excel
- How to Name areas in an Excel workbook
- How to use the AutoCalculate tool in Excel
- How to create and use an Excel Function
- How to create and modify Charts in Excel
- How to identify the different Charts available in Excel
- How to create a Text box and Arrows in Excel
- How to Print a Chart in Excel

Who should take this class

Any person who is familiar with the basics in Excel and who is ready to begin learning the intermediate-level features.

Excel Tips and Shortcuts:

Control -Z to **Undo**.

Control -S to perform frequent **Quick Saves**.

Control -Home to go to the top of worksheet

Control -C to **Copy**

Control -X to **Cut**

Control -V to **Paste**

Double-click or **F2** to **Edit** a cell

F11 to create a **Quick Chart**

Alt + = to create **AutoSum**

F4 to **Repeat** last action

Linking Worksheets

Linking helps to consolidate data from many workbooks/sheets into one. Create summary work book/sheets for various views of the same data; create a large model from several models. You can link individual cells or cell ranges from one worksheet to another worksheet. When you update information in one worksheet, it is automatically updated in the linked worksheet. However, formulas cannot be transferred.

Linking Cells

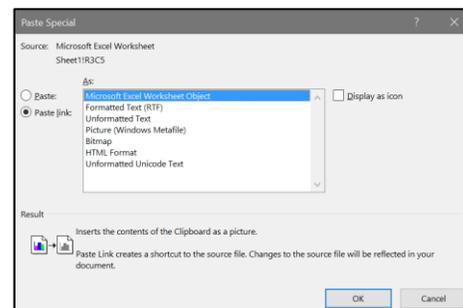
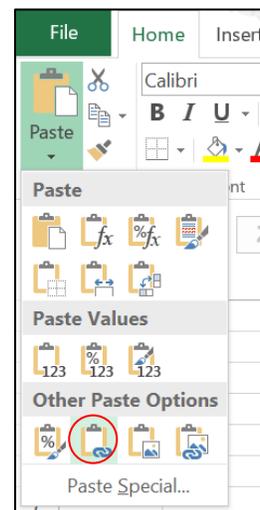
1. Open the **Dependent** work book/sheet, the worksheet you want to paste links to.
2. Open the **Source** workbook, the worksheet you want to copy links from.
3. Select the cell or range of cells to link from in the **Source** work book/sheet, select **Copy** from the **File Tab** menu.
4. Switch back to the **Dependent** work book/sheet.
5. Click once where you want to insert the link, click on the down arrow under the **Paste** icon (**Home Tab menu**) and select the **Paste Link** button.

The dependent work book/sheet contains an external reference formula--a formula that refers to a cell or cell range in the supporting document, i.e.,**{=[workbook.xls]sheetname!\$D\$9}**.

Copying and Pasting Link between Excel and Word

You can also create a link between data in Excel and Word so that when information is updated in the Excel worksheet, it is also updated in Word.

1. Select the cell or range of cells to link from in the workbook, select **Copy** from the **Home tab** menu.
2. Open MS Word Document
3. Click once where you want to insert the link, click on the down arrow under the **Paste** icon (**Home Tab menu**) and select **Paste Special**.
4. Choose **Microsoft Office Excel Worksheet Object** from the list to paste the copied content, and choose **Paste Link**. Then press **OK**.



Changing links/formulas to values

At some point you may want to break a link in a dependent work book/sheet or change formulas to values.

To break links or change formulas to values:

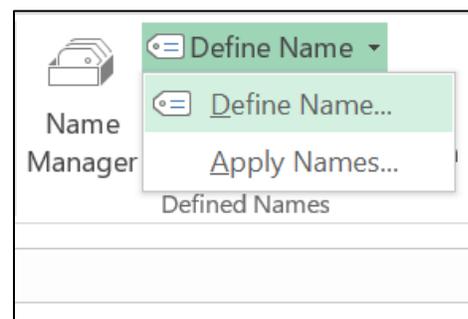
1. Select the cell or range of cells that you want to convert.
2. Select **Copy** from the **Home Tab** menu.
3. Click on the down arrow under the **Paste** icon (**Home Tab menu**) and select **Paste Values**.

Naming cells and cell ranges

Name a cell or range of cells for easy access to a worksheet area.

To create a name:

1. Select the cell or range of cells to name.
2. Click once in the **Name Box** in the left most part of the formula bar
3. Type in a **Name** for the selection; press **Enter**.
*Tip: Remember not to include spaces when you name your cells.
4. Access the named area by clicking on the down arrow in the name box and selecting the named area.



To delete the named area: from the **Formulas** tab, click on the **Name Manager** icon. Choose **New**, **Edit** or **Delete** to work with named cells.

AutoCalculate

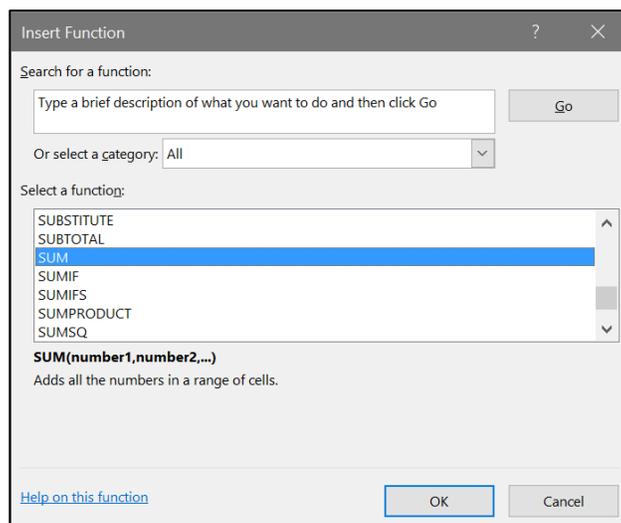
Use the AutoCalculate feature to automatically view selected areas **AVERAGE**, **COUNT**, **COUNT NUMS**, **MIN**, **MAX**, or **SUM**.

Select the area to calculate then right-click on the **AutoCalculate** area in the **Status Bar** (bottom bar, to the right of "Ready") and choose from the options available. Your calculation will appear on the right side of the **Status Bar**.

Function Library

1. Click in the cell where you want to create a formula.
2. Click on **Insert Function** underneath the **Formulas Tab**.
3. Click on the appropriate category where you think your function would be. If you're uncertain, select **All** from the "Or Select a Category" drop down menu.
4. Complete the function by filling in the required data in the function's **Argument**. Use the **OK** button or click **Help on this function** to view examples of the function syntax.
5. Click **OK** to close the Function dialog.

***Tip: You can also choose from any of the functions available under the Function tools.**



If Function

Use the IF function to create conditional formulas that analyze data and return a value based on the results of the analysis. For example, you can configure your worksheet to:

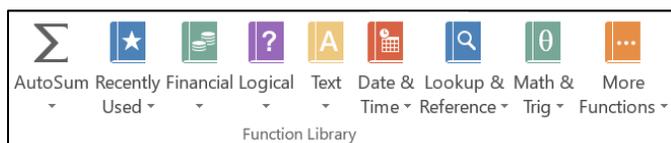
- Display a message when a condition is true, for example, "overdue" when an unpaid invoice is over 30 days old.
- Return a value based on the results of a calculation, such as a discount percentage if an invoice is paid within 30 days of the invoice date.
- Cross-check for errors. For example, display an error message if row and column totals don't agree.
- Prevent the #DIV/0! Error value from appearing when the divisor field is blank or 0 (zero).

The IF function uses the following arguments:

=IF(logical_test, value_if_true,value_if_false).

=SUMIF(B3:B10,">5")

=COUNTIF(D1:D180,"textemapple")



Creating Charts

Create a chart to show the visual relationship between your data.

There are eight basic chart types: area, bar, column, line, pie, doughnut, radar, XY (Scatter), pivot chart and etc.



There are two categories of charts: **Embedded and Stand Alone.**

An **embedded chart** is part of a worksheet; a **stand-alone** chart is separate from the worksheet.

Both types of charts are automatically linked so that any changes to the worksheet will appear in the associated charts.

The **x axis** (the horizontal line) shows the **data classification**; the **y axis** (the vertical line) shows the **quantity or unit of measure**.

Tip: to chart non-consecutive data, use the Control/Command key when making selections.

Use the **ChartWizard** tool in the **Standard** toolbar to guide you through the steps for making charts.

Chart Types	Use
Line and Area	Illustrate trends.
Pie	Display relationship of parts to whole. Note: only one data series.
Doughnut	Like the Pie chart, but allows for charting more than one data series.
XY	Correlates relationships between data.
HLCO	Represents values within values.
Radar	Compares actual and projected data.

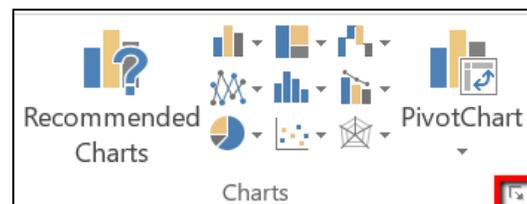
Creating Stand Alone Charts

1. Select the range of data and labels to chart.
2. Press **F11**. A default chart is made available.
3. A **Chart** tab is added to the workbook.

Embedding Charts

1. Click and drag over the range of **data** and **labels** (exclude titles) you want to chart. (**Do not select empty cells outside the area or a title**)
2. Click on the **Insert** tab, then choose from the available **Chart** types.
3. Vary the Chart elements by choosing from the various **Chart Layouts**.
4. Experiment with the **Chart Styles** and **Chart Types**, as needed.

Tip: If you click the bottom arrow of the group from Insert tab, charts, you can see all the charts excel provides.



Modifying Charts

Resizing, moving and deleting an embedded chart:

To resize an embedded chart: click inside the chart. Position the mouse pointer on any one of the **8 resizing handles** until you get a **double-headed arrow**. Click and drag on the arrows to resize

To move a chart: click anywhere inside the chart and drag it

To delete a chart: click once on the chart and press the **Delete** key

Right Button Options:

- **Change the chart type:** select **Chart Type**
- **Insert Titles:** add a title, and axis labels
- **Insert Axes:** add or remove axis
- **Insert Gridlines:** add or remove gridlines
- **Insert Data Labels:** add values, labels or none

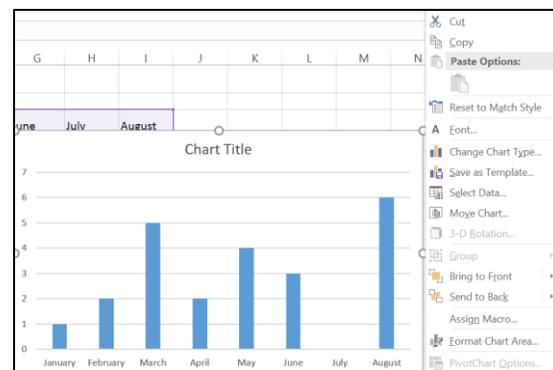
Double-Click on Object Options:

- **Format Chart Area:** Format Patterns and Font
- **Format Plot Area:** Format the borders and colors/shading of the plot area
- **Format Axis:** Format Patterns, Scale, Font, Number and Alignment
- **Format Data Series:** Format Patterns, Axis, Name & Values, Y Error Bars, Data Labels
- **Format Legend:** Format Patterns, Font, and Placement

To add, edit or delete the data series: Select the chart by clicking on it; click on the ChartWizard tool; select the new range of cells from the worksheet.

To add arrows or lines: click on the **Drawing** tool. The draw toolbar opens. Click on the tool of choice, then click and drag to shape the object.

To add a text box: click on the **Text Box** tool, the mouse pointer becomes a cross. Click and drag to create a text box and type in the desired text. Type in the desired text.



To edit existing text: click once on the text object to select it, then click on the text to edit.

Printing

Print an embedded chart using the **Print** dialog. If you want to print the embedded chart as if it were a stand-alone chart (to fit it onto one page), double click on the chart, then print.

Subtotaling, Grouping and Outlining Data

Use the subtotaling, grouping and outlining data tools to organize and consolidate data for more meaningful analysis.

You will first need to sort a column of data before grouping it.

1. Select the range of cells you wish to include in the analysis.
2. Click on the **Data** tab, then choose **Sort**.
3. Choose a column from the **Sort By** pull-down menu. Select **OK**.
4. Choose the **Group** tool and select **Row** or **Column**
5. Click on the **Subtotal** tool, select the appropriate option from the **Change In** menu, function, and subtotal break option.
6. Click **OK** to view subtotals.

