Excel Intermediate Training Objective

To learn the tools and features to get started using 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/Command-Z to Undo.
Control/Command-S to perform frequent Quick Saves.
Control/Command-Home to go to the top of worksheet
Control/Command-C to Copy
Control/Command-X to Cut
Control/Command-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 into one. Create summary workbooks 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.

Linking Cells

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

The dependent workbook 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 **Top Tool Bar**.
2. Open the **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 Workshop Object** from the list to paste the copied content.
Changing links/formulas to values

At some point you may want to break the link in a dependent workbook 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 Top Toolbar, Edit Tab (or command + C)
3. Click on the down arrow under the Paste icon (Home Tab Menu) and select Paste Special.
4. In the Paste Special dialog box, select Values or other and click OK.

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 the Insert Tab and then Define Name
3. Type in a Name for Names in Workbook; press Enter.
4. Access the named area by clicking on the down arrow in the Insert Name and selecting the named area. You can also select the bar above the A column and select your defined name from the drop down menu.

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 a selected area 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 selected calculation will appear on the Status Bar.
**Functions**

Click on the **Insert Tab** tool to perform specific types of calculations and data analysis.

1. Click in the cell where you want to create a formula. Click on **Insert...**
2. Complete the function by filling in the required data in the Arguments section, located at the bottom of the dialogue box.
3. Click on the first number you would like to include in the function.
4. Click the **Plus (+) Icon** to add another argument or number.
5. Press Enter on the keyboard to finish the function.

**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 bland or 0 (zero).

The IF function uses the following arguments:

=IF(logical_test, value_if_true, value_if_false).

=SUM(IF(C2:C180="firsttextexample",IF(D2:D180="secondtextexample",1,0)))

Press **Command-Shift-Enter after the third closed parentheses**.

=COUNTIF(D1:D180,"textexample")

**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, and XY (Scatter).
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.

### Chart Types

<table>
<thead>
<tr>
<th>Chart Type</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line and Area</td>
<td>Illustrate trends.</td>
</tr>
<tr>
<td>Pie</td>
<td>Display relationship of parts to whole. <strong>Note:</strong> chart only one data series.</td>
</tr>
<tr>
<td>Doughnut</td>
<td>Like the Pie chart, but allows for charting more than one data series.</td>
</tr>
<tr>
<td>XY</td>
<td>Correlates relationships between data.</td>
</tr>
<tr>
<td>HLCO</td>
<td>Represents values within values.</td>
</tr>
<tr>
<td>Radar</td>
<td>Compares actual and projected data.</td>
</tr>
</tbody>
</table>

### 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 **Charts Tab** to the right of the **Home** button and 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.
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 right click **Clear**.

Chart Layout: To the right of the **Chart Tab** is **Chart Layout and Format**.

- **Chart Titles**: Add or remove the chart title.
- **Axes Titles**: add or remove axis
- **Legend**: Add or remove the chart legend
- **Data Labels**: Add, remove, or format Data Labels
- **Gridlines**: add or remove gridlines

Right Click Options:

- **Change the chart type**: select **Change Chart Type**...
- **Format Chart Area**: Format Patterns and Font
- **Select Data**: Allows you to change the Y and X values as well as switch Rows/Columns.
- **Move Chart**: Allows you to move the chart in a new sheet.
- **Save as Picture**: Allows you to use the chart in other programs.
Chart Layout Options:

To add, edit or delete the data series: Select the chart by clicking on it; click on the Chart tab; 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 at the top menu, and then choose Sort...
3. Choose how you would like to sort the cells
4. Choose the Group tool and select Row or Column. Select OK
5. Click on the Subtotal tool from the Data Tab; select the appropriate option from the Change In menu, function, and subtotal break option.
6. Click Ok to view subtotals.