Things to Know Before You Start

FORMULAS

- Used for making calculations
- Can be specific/closed (=324+526) or general/open (=a1+b1)
- Use as many references (cell names) as possible to avoid changes in the future
- ALWAYS start with an equal sign (=)

COMMON FUNCTIONS

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>=sum</td>
<td>To add or subtract</td>
</tr>
<tr>
<td>=average</td>
<td>To average</td>
</tr>
<tr>
<td>=max</td>
<td>To find the largest number</td>
</tr>
<tr>
<td>=min</td>
<td>To find the smallest number</td>
</tr>
<tr>
<td>=count</td>
<td>To count the number of numeric items entered</td>
</tr>
<tr>
<td>=countA</td>
<td>To count the number of numeric and text items entered</td>
</tr>
<tr>
<td>=IF</td>
<td>To set up a condition (condition, value-if true, value-if false)</td>
</tr>
</tbody>
</table>

For MORE FUNCTIONS go to FORMULA RIBBON

- In Formula Library, you will find...
  - Insert Function
  - AutoSum
  - Collections by Use (Financial, etc)
- To see a description of the function, hold your cursor over the choice.

SYMBOLS OF OPERATION

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>Add</td>
</tr>
<tr>
<td>-</td>
<td>Subtract/negative</td>
</tr>
<tr>
<td>*</td>
<td>Multiply</td>
</tr>
<tr>
<td>/</td>
<td>Divide</td>
</tr>
<tr>
<td>()</td>
<td>To group/calculate first</td>
</tr>
</tbody>
</table>
To WRITE a FORMULA

- **ALWAYS** begin with an **EQUAL SIGN** (=).

**To perform a simple operation**

- Enter the equation using the appropriate operation symbol.

**EXAMPLE:** =45*6

This formula will appear in the formula bar. The answer (“value”)—270—will appear in the cell.

To USE a FUNCTION

- Type or select a FUNCTION.

**NOTE:** As you begin to type a function, a drop-down menu will appear with a list of options. You may choose an option from the list or continue typing. If you are unsure which option to choose, holding your cursor over the choice will produce a brief description.

- Select the cell(s) to be included in the calculation.

- Follow rules of order: Parentheses, Mult/Div, Add/Sub

**EXAMPLE:** =sum(b2+b3+b4+b5)

This formula will appear in the formula bar. The answer will appear in the cell.

Alternate ways to write a formula

- Indentify a Range of Contiguous Cells with a colon (:) **OR** Click & Drag
  **EXAMPLE:** =sum(b2:b5)

- Indentify Non Contiguous Cells with a comma (,) **OR** hold CTRL and Click
  **EXAMPLE:** =sum(b1, b5) **OR** =sum(b2:b5, c5) **OR** =sum(b2:b5, 100)

**NOTE:** In all formulas, blank cells will be counted as zero (0).
To COPY into adjacent cells USING “FILL:”

- Click in the cell you want to copy and drag to highlight cells above, below, to the left or to the right of the original cell.
- On the Home ribbon, select Fill from the Editing section.
- Select Down, Right, Up, or Left as needed. The date will be copied into the highlighted cells.

**NOTE:** If you are copying a formula, the system will automatically adjust the cells in the direction you’ve chosen.

**EXAMPLE:** You have written =a1+b1 in Cell C1, and you fill the next three rows (C2, C3, C4) with that formula. The system will adjust the cell names to correspond to the new row: =a2+b2, =a3+b3, =a4+b4.

To COPY into adjacent cells USING CELL HANDLE:

- Click in the cell you want to copy in order to highlight it. A small black square will appear in the lower right corner of the cell.
- Click on the black square (a + handle will appear) and drag across desired columns or rows.

To CREATE CONSECUTIVELY NUMBERED CELLS:

- Follow directions above for copying using a cell handle. An Auto Fill Options box will appear at the end of the row or column.
- Click the down-arrow and select “Fill Series” from the list.

RESOURCES for FUNCTIONS & FORMULAS

BUILT-IN EXCEL FUNCTIONS

[http://www.excelfunctions.net/ExcelFunctions.html#StatisticalFunctions](http://www.excelfunctions.net/ExcelFunctions.html#StatisticalFunctions)
CONDITIONS

To set rules
- Highlight affected data
  - To highlight entire worksheet, click in the upper left-hand corner of the sheet where the column headings meet the row headings
- On Home ribbon, select Conditional Formatting from the Styles section
- Select desired rule & set parameters
- Click OK. Data will be formatted according to the rule.

To clear rules in specific cells
- Highlight cells
- Under Conditional Formatting, select Clear Rules
- Click Clear Rules from Selected Cells

To clear rules in entire worksheet
- Under Conditional Formatting, select Clear Rules
- Click Clear Rules from Entire Sheet

To write a new rule
- Highlight cells
- Under Conditional Formatting, select New Rule
- Click Clear Rules from Selected Cells
- Select a Rule Type
- Edit the Rule Description
- Click OK
CREATING CHARTS

To create a chart
- Create column/row headings
- Enter data into worksheet
- Highlight data including column/row headings
- On Insert ribbon, select the desired chart type from the Charts section

To format the chart
- Double click on the frame of the chart or select one of the tabs in the Chart Tools that appear at the top of the screen.
  - Design: Change style or chart type; switch rows/columns
  - Layout: Add titles & labels; name chart;
  - Format: Change colors

To move the chart
- Right click on the frame of the chart
- Select Move Chart
- Choose where you want the chart to be placed:
  - New Sheet—opens chart in its own worksheet with tab
  - Object In—places the chart in another worksheet within the book

To FREEZE PANES

To freeze column headings at top
- On the View ribbon, select Freeze Panes from the Window section
- Click Freeze Top Row

To freeze row headings on left
- On the View ribbon, select Freeze Panes from the Window section
- Click Freeze First Column

To unfreeze panes
- On the View ribbon, select Freeze Panes from the Window section
- Click Unfreeze panes
To VIEW TWO WORKSHEETS SIMULTANEOUSLY

- On the View ribbon, select New Window. A second copy of your workbook will open in a separate window.
- On the View ribbon, select Arrange All
- Choose a format
- Click OK. You can now view multiple worksheets at the same time.

To SORT DATA

- Highlight data to be sorted without column headings
- On the Home ribbon, select Sort & Filter from the Editing section

To perform a quick sort based on the first column of data,
- Select Sort A-Z or Sort Z-A

To perform a custom sort,
- Select Custom Sort
  - Select a column heading from Sort by drop-down list
  - Select a criteria to Sort on (“values” refers to content—text or numeric)
  - Select the order
  - Click OK

FOR ADDITIONAL INFORMATION OR TRAINING, CONTACT:

Information Center for Educational Technologies
Phone: 608-342-1792
Email: icet@uwplatt.edu
Website: www.uwplatt.edu/icet