MS Excel 2007 Basics

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- Explanation of key terms in MS Excel
- Navigation of Excel Window and Basic Tools
- Creation of a Workbook
- Workbook Data Entry, Formatting
- Calculations: total, average, simple formula
- Graphs/Charts

Key Terms in MS-Excel

- A spreadsheet (worksheet): a piece of paper in which data can be manipulated by the computer stored in rows and columns.
- A workbook (Excel file) has multiple sheets.
 - Each sheet may have multiple pages.
 - Record and organize information in a row (record)-andcolumn (field) format.
 - Make calculations and simple statistical analyses across a row or a column.
 - Create charts based on the data displayed in a spreadsheet.

Workbook vs Sheets

- A workbook refers to an Excel document. You will sometimes hear it called a "spreadsheet."
- In Default, each workbook has 3 "sheets" associated with it. You can rename these sheets to something more fitting to your purpose(e.g. Fall Term, Summer Term, Spring Term...)
- You can add sheets if you'd like to.
- Your workbook is the ENTIRE file and the file name should reflect the function the file serves.
 - Inventory.xlsx

Excel Workbook Window

- Open the MS-Excel
 - Start-All Programs-Microsoft Office Microsoft Office Excel 2007
 - This creates a new workbook.
- Open an Excel workbook double-click on the practice file named "homeexpense.xlsx"
- Open an Excel workbook in Excel
 - Click on Office Button and select Open.
 - Locate the file via file folders.
 - Double-click on the file.



Excel Window



Microsoft Office Button

•Performs many of the functions that were located in the **File** menu of older (or Excel 2010) versions.

–New, Open, Save, Save As, Print, Send, Close, etc.

•File Format

- -Save As
 - •Excel Workbook, .xlsx

–Smaller size with new Office 2007 features.

- •Excel 97 2003 Workbook
- •Other Formats: web page, .csv

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New	Save a copy of the document						
Open	Excel Workbook Save the workbook in the default file format.						
<u>S</u> ave	Excel Macro-Enabled Workbook Save the workbook in the XML-based and macro-enabled file format.						
Save As	Excel Binary Workbook Save the workbook in a binary file format optimized for fast loading and saving.						
<u>₽</u> rint ►	Excel <u>9</u> 7-2003 Workbook Save a copy of the workbook that is fully compatible with Excel 97-2003.						
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Ribbon



- Each "tab" (such as "Home", "Insert"...) will open a ribbon with several command items each in similar groupings.
- Home: has the common formatting tools, clipboard, fonts, paragraphs, number, Styles, Cells, and Editing.

The Workbook

- The workbook is comprised of:
 - Rows (labeled numerically)
 - Columns (labeled alphabetically)
 - Cells
- A cell is labeled with both a numerical and alphabetical value.
 - Naming convention:
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- Tab Key: navigate cells.



Steps - Creation of a Workbook

- 1. Create a new workbook.
- 2. Save it with a file name.
- 3. Enter data: column headings, row headings, and data.
- 4. Format data: column headings, row headings, and data.
- 5. Save the file.

A New Workbook

- You have a blank workbook when you open Excel.
 - Or click on Office Button and select New.
 - Click on Create button.





Save a Workbook

- Click on Office Button and select Save or Save As.
 - Save: save the workbook as .xlsx. This format is Excel 2007 compatible. It cannot be opened in previous version of Excel unless you have an Office 2007 converter installed.

- Save As:

- Excel Workbook .xlsx
- Excel 97 2003 Workbook .xls
- Other Formats .CSV and others.



Creation of a Workbook

- You should always enter headings to columns and rows to identify what the numbers represent.
- Practice: make a workbook of home expenses.

Items	January	February	March	Total	Average
Clothing					
Grocery					
Gas					
Utilities					
Total					

Data Entry

- Place your mouse in a cell and click once. This will allow you to enter data in that cell.
- To move HORIZONTALLY across cells, hit TAB.
- To move VERTICALLY, hit ENTER.
- Practice:
 - Enter column heading and row heading.
 - Enter data.

Autofill – Fill in Months

AutoFill Enter the months of the year, the days of the week, multiples of 2 or 3, or other data in a series. You type one or more entries, and then extend the series.

• Fill in the months of the year

- Type in the first 2 months.
- Change the cell type to Date type.
 - Select the row of the months by clicking on the row tab such as "1". Go to Format and select Format Cells... (bottom).
 - Select **Date** and click on **OK**.

•Highlight the cells of the two months and drag the bottom right corner to expand the cells with the rest of the months.

	А	В	С	D
1	Items	January	February	
2			C	March
2				

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Types of Data



- You can enter numerical or text data in a cell.
- Enter numbers in cells. You may need to change the cell format to numbers.
 - Highlight number cells in the practice file, go to Format and select Cell Format. Select Number and click on OK.
- If you see ######, you need to expand your column so the data fits.
 - Double click on the line between the two column headings to auto-fit.
 - Drag the border between two columns.
- Change numbers to Currency with \$ sign.
 - Highlight all number cells and click on \$ icon.
- To enter fractions, leave a space between the whole number and the fraction. For example, 1 1/8.
- To enter a fraction only, enter a zero first. For example, 0 1/4. If you enter 1/4 without the zero, Excel will interpret the number as a date, January 4.

Insert a Row/Column

- Insert a row:
 - Select the row you would like to insert above
 - Clicking on the row number tab.
 - In Home tab, go to Insert and select Insert Sheet Rows.

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- Insert a column:
 - Select the column you would like to insert next to it
 - Clicking on the column letter tab such as L.
 - In Home tab, go to Insert and select Insert Sheet Column.



Change Column Width or Row Height

- Column Width
 - Drag the border between two columns to adjust a column width.
 - Adjust column width for a group of columns
 - Highlight the columns you want to adjust their width.
 - In Home tab, go to Format and select Column Width...
 - Enter a number of characters for column width. Click on OK.
- Row Height
 - Drag the border between two rows to adjust a row width.
 - Adjust row width for a group of rows
 - Highlight the rows you would like to change their height.
 - In Home tab, go to Format and select Row Height.
 - Enter a number of the row height and click on **OK**.
 - One point=.035 cm



Format a Worksheet



- Change the font size, color, and the background of a cell or group of cells.
- Select the cells you'd like to change. Then select a formatting tool.
- To show cell borders, highlight the cells and select a border.

Table Styles and Cell Styles

- Table Styles
 - Highlight the Excel table (all cells), go to Format as Table icon. Select a table style.
- Cell Styles
 - Highlight cells, go to Cell Styles, select a cell style.

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Excel - Header and Footer

• In Insert tab, click on Header & Footer icon.



• Type in a header in the Header box.

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- Click on **Go to Footer** icon. Click on **File Name** icon to insert the file name in the Footer box.
- To go back to the Normal view of the spreadsheet, click on **View** tab and select **Normal**.



Conditional Formatting

- Format cells based on a condition
 - Red font for expenses that exceed \$100.
 - Highlight the cells you would like to apply a conditional formatting rule.
 - In Home tab, select Conditional Formatting. Select Highlight Cell Rules and Greater Than.
 - Select a cut point number (100) and a style of text.



Conditional Formatting

- Explore more conditions
 - Top/Bottom Rules: Top 10, Above Average
 - Data columns
 - Formatting Styles
 - Color Scale







Basic Calculating Functions – Total, Average

- Excel has mathematical functions for you to use.
 - Total
 - Click on the Cell that displays a total.
 - In Home tab, click on the sum function icon.
 - Highlight the cells included in the total and hit Enter key.

— Average

- Click on the cell that displays an average.
- In **Home** tab, click on the little down arrow in the sum function icon and select **Average**.
- Highlight the cells included in the average and hit Enter key.



Sum (Alt+=)

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Creating Basic Formula

- You conduct a mathematical calculation in Excel by typing a simple formula into a cell. An Excel formula always begins with an equal sign (=).
- Math operators
 - Addition: +
 - Subtraction:-
 - Multiplication:*
 - Division:/
- Example: Gas + Utilities
 - Click on the cell that displays the expense of Gas and Utilities.
 - Enter =.
 - Click on the Gas cell for January.
 - Enter +.
 - Click on the Utilities cell for January
 - Hit Enter key.

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	3	Grocery		2.30	
	4	Gas		5.30	
	5	Clothing		56.80	
	6	Utilities		56.80	
	7				
	8				
	9	Total			
	10				
	11	Total of Utilities and Gas	=B4+6	36	ļ
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Copy a Formula

- You may copy the same formula onto a series of cells.
 - Example, a total expense in each of all 12 months.
 - Select the total cell for January.
 - Drag the bottom right corner of the cell to expand to the December total cell.
 - The total expense is then calculated for all 12 months.

PracticeTotal for each of the categories

	B9 🔻 🤇		<i>f</i> ∗ =SUM	(B3:B8)	
	А	В	С	D	
1					
2	Items	January	February	March	A
3	Grocery	2.30	100.00	300.00	
4	Gas	5.30	120.00	230.00	
5	Clothing	56.80	34.70	234.90	
6	Utilities	56.80	90.80	78.40	
7					
8					
9	Total	121. <mark>20</mark>	345.50	843.30	

Merge and Center

- You may want to add a title for an Excel table.
- Insert a row above the column heading row.
- Type the title in the first cell of the title row.
- Highlight the cells you would like to display the table title.
- Click on Merge and Center icon.



Print an Excel Sh

- As default, there are no borders around cells.
- For printing, there are two ways to print boarders around cells.
 - Gridlines: This way adds gridlines around the cells in the table.
 - Click on Page Layout tab.
 - Click on Page Setup group.
 - Click on Sheet tab.
 - Check Gridlines. Click on OK.
 - Add borders: This way adds borders around the cells you selected.
 - Highlight the cells you want to have borders.
 - In **Home** tab, click on the down arrow next to the border icon and select a choice of borders.
 - You have flexibility of selecting a variety of borders.

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Page Layout

- Orientation
 - The vertical dotted line specifies the right border of a page in a spreadsheet.
 - You may change the page orientation from Portrait to Landscape. Go to Page Layout tab, click on the Orientation icon and select Landscape.
 - You may adjust the width of columns to fit the columns into a page.
 - Double click on the border between the titles of two columns to automatically adjust the column width.
 - Drag the border between the titles of two columns to adjust the column width.
- Margins
 - To adjust the margins of a page, in Page Layout tab, click on Margins icon and select Custom Margins. Change margins and click on OK.
- Sheet Name
 - To give a name of a sheet, double-click on the sheet tab and enter the name.



Page Layout

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Column and Pie Chart

• A column chart to show monthly expenses.

• A column chart to show the comparison of expenses in selected months.

• A pie chart to see the percentage/amount of each expense category.







Column Chart - Monthly Expense

- Highlight the expenses with the headings of 12 months.
- Click on Insert tab.
- Click on the arrow in **Columns** icon in **Charts** group.
- Select a column chart.
- To enter a title for the chart, choose a chart layout in **Chart Layouts** group. click on the Title Box and type a title.
- You may change a layout or a style of the chart by selecting a style or a layout.



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Column Chart - Expense Comparison

- Display expense comparisons among January, March, and June.
- Four columns: Items, January, March, and June. Use "ctrl" key to select multiple columns.
- Go to **Insert** tab and select a column chart under **Column** chart icon.
- Click on Switch Row/Column icon to change the comparison: comparison among months' categories.





Pie Chart - Expense Distribution

- Highlight the Items column and the Total Expense Column (ctrl).
- Go to **Insert** tab.
- Select a **Pie** chart in **Pie** icon.
- To show a percentage, click on the first icon in **Chart Layouts** group.







Pie Chart - Format

- To add a title for the pie chart, choose a layout with a title box, click on the title box, and type the title.
- Add background for the chart: Right-click on the chart and select **Format Chart Area**....
 - Select a Fill style, border color, border style, etc. Click on **Close**.



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Key Steps in Charting

- Create the columns/rows that have the data you need to draw a chart.
- Select the columns/rows needed.
 - Hold "ctrl" key to select non-continuous columns.
 - Hold "shift" key to select continuous columns.
- Select a chart type in **Insert** tab.
- Enter Chart title.
- Select a style of a chart.