

Microsoft Excel ShortCourse Handout

July 2004

Copyright © 2004 Heide Mansouri, Technology Support, Texas Tech University. ALL RIGHTS RESERVED. Members of Texas Tech University or Texas Tech Health Sciences Center may print and use this material for their personal use only. No part of this material may be reproduced in any form without written permission from the [author](#).

Introduction

Excel is the spreadsheet and data analysis program in Office XP. Excel is used for Accounting, Calculations, Graphs and Charts, Databases, Analysis, Reports, and Automating Routines. With Microsoft Excel you can create charts, maintain lists, record macros to expedite repetitive tasks, bind relating documents in workbooks, and automate mathematical functions.

Course Objectives

After completing this shortcourse, you should be able to:

- Differentiate between a worksheet and a workbook;
- Create workbook and worksheets;
- Insert columns or rows into a worksheet;
- Format a worksheet;
- Delete a column or a row from a worksheet;
- Rename a worksheet;
- Recognize the order of operations in a worksheet;
- Use functions included in Excel;
- Recognize Error; and
- Print a workbook, worksheet, or an area of a worksheet.

To Start Microsoft Excel Program

- Click on the Start menu button on your computer desktop.
- Choose Programs.
- Click Microsoft Excel; a new workbook (the default) will open.
- Or, from the main menu, choose **File > New**, and click on the **Blank Workbook** link in the **New Workbook** Task Pane.

Workbooks

You can create a new Workbook by selecting a Spreadsheet solution template or by clicking on the Workbook icon located within the General tab to use the default template.

Saving Your Workbook

From the File menu, select **Save As**, and type a name for your file

- Determine where on your computer disk to save it.
- Click OK.

SAVE OFTEN! It can be heartbreaking if you lose a half hour of work...so Save, Save, Save!

Excel Environment

The Excel window can be divided into 5 distinct areas:

Toolbars (located under the main menu) – By default, the Standard and Formatting toolbars are displayed.

To show a Toolbar:

- Choose View > Toolbars > select the toolbar you want.

The Standard Toolbar provides quick access to commonly used actions.

To move a Toolbar:

- Click and drag the toolbar where you want it.

Formula Bar is located under the toolbars and provides quick access to common formatting actions.

Worksheets

Worksheet is the main area of the window (using the Move cursor).

Task Pane

Task Pane is the panel to the right of the worksheet.

Status Bar

Status Bar is located at the bottom of the window.

Formula Bar

The Formula Bar displays contents (data or formula) of the highlighted cell. To the left of the Formula Bar is the Name Box; it displays the Cell Name of the highlighted cell.

To show the Formula Bar:

Choose View > Formula Bar > Checkmark the one you need to use (un-checkmark to hide it).

Office Assistant

The Office Assistant will watch what you do and offer tips on how to work more productively. You can also use it to answer questions or obtain help with Excel.

Working with Workbooks and Worksheets

Excel automatically starts with a new Workbook containing 3 Worksheets.

A Workbook consists of one or more Worksheets.

A Worksheet is a very large table, consisting of rows and columns.

A **Worksheet** is a very large table (or spreadsheet), consisting of rows and columns. Rows are identified by numbers while columns are identified by letters (**65, 536**

rows, 256 columns, and 255 characters per column). You enter your data at the intersection of the rows and columns (active cell).

A **Workbook** consists of one or more Worksheets. The name of the worksheets is displayed on the sheet tabs at the bottom of the Excel window. By default the Worksheets will be named **Sheet1, Sheet2, and Sheet3**.

To Rename a Worksheet:

- Double-click on the sheet tab, type a new name, and press the **Enter** key.

To change the color of a Worksheet:

- Right-click on the **Sheet Tab**; choose **Tab Color > Select a color**.

Entering Data into a worksheet

Data (Text, Dates, and Numbers) can be entered into cells with your keyboard. To enter data of any type, click on a cell (intersection of a row and a column) that you want to contain that data, type your data, and press the Enter or Tab key when you want to move to the next cell vertically or horizontally, respectively.

Using the arrow keys to navigate inside a worksheet

- Enter = the down arrow key
- Shift and Enter = the up arrow key
- Tab = the right arrow key
- Shift and Tab = the left arrow key

Using time-saving features

- AutoComplete can speed up data entry, especially if you have to enter a particular word or phrase repeatedly.
- AutoCorrect looks at the entry you are making and checks it against a predefined list of common errors.
- Choose Tools> Autocorrect Options.

Editing Data

To edit the contents of a cell, you need to select the cell, and then retype the entry. The old entry will be replaced by the new entry.

Selecting Items in Excel

- Select a Column by clicking on the Column header.
- Select a Row by clicking on the Row header.
- Select a range by clicking on the first Cell; hold down the Shift key, and click the Opposing Cell in the Range.

To format text

- Click Format > Cells > Font for:
 - Justification
 - Font, size
 - Bold, italic, etc.

To format Numbers

- Click Format > Cells > Number > Date.
- The Alignment tab of the Format cells dialog box gives you great control over how your text is aligned.

Formatting Columns and Rows

Column width and Row height can be changed numerically and visually.

- Choose Format >Columns/Rows

Formatting with Colors and Patterns

- You can customize the look of your spreadsheets by changing the font Color or by adding a Fill Color or Pattern.
- You can use Adding and Editing Borders.

Excel SC

- The Border tab of the Format Cell dialog box provides many options to customize your borders.
- Use Format Painter to copy the format of one cell to another. Click the desired cell.
 - Click Format Painter brush button on the Standard toolbar.
 - Click the cell to which you want to copy the formatting.

Spell check

- Click Tools > Spelling

Cut, Copy, and Paste

Excel uses the Microsoft Office Clipboard. The Clipboard can hold up to 24 copied items. Number 25 will replace No. 1, etc.

To Cut (delete) data:

- Select the cells you want to cut.
- From the main menu, choose **Edit > Cut**,
- OR click on the **Cut icon** on the Standard toolbar,
- OR **right-click** on the selection, and choose **Cut** from the pop-up menu,
- OR press **[Ctrl]** and **X**.

To Copy data:

- Select the cells.
- From the main menu, choose **Edit > Copy**,
- Or click on the **Copy icon**,
- OR **right-click** on the selection > **Copy**,
- OR **[Ctrl]** and **C**.

To Paste data:

- Place the cursor where you want the data to appear.
- Choose **Edit > Paste**,
- OR click on the **Paste icon**,
- OR **right-click** on the cell > Paste,
- OR press **[Ctrl]** and **V**.

Using Find and Replace

Click Edit > Click Go To: to go to specific cells.

Click Edit > Click Find: to find words or specific information.

Using Undo and Redo

Excel supports up to 16 levels of Undo and Redo.

Use the Undo or Redo icons on the Standard toolbar to Undo or Redo one level.

Use the down arrow beside the icons to select multiple **undo** and **redo**.

Entering Formulas

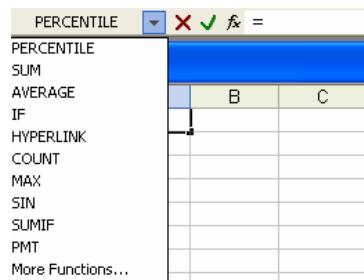
- Select the cell in which you want the results to appear.
- Type = sign (in Excel, all the formulas start with = sign).
- Type your formula. For example =B9+C9+D9.

Excel uses the following Order of Operations:

1. %, for Percent
2. ^, for Exponential
3. * and /, for Multiplication and Division
4. + and -, for Addition and Subtraction

Entering Functions

Excel provides over 434 predefined formulas called *functions* to help you quickly setup simple and complex calculations. The functions included in the AutoSum on the standard tool bar will insert the function and predict the arguments. Some of the most common functions can be accessed through the **AutoSum icon**, such as: **Sum, Average, Count, Max, and Min.**

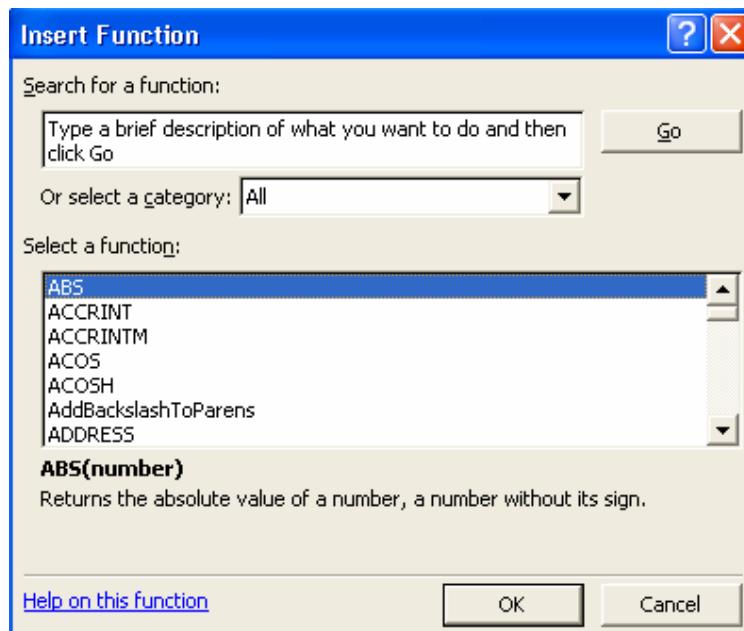


To enter a function:

- Click in a cell.
- Type = sign.
- Enter the function name, followed by an open parenthesis, followed by the range, a close parenthesis, for example: =sum(A1:A8).
- Press the Enter key.

To use the function Wizard:

- Select a Cell to place the result in.
- From the main menu, choose Insert > Function.
- Choose the name of the function.
- Follow the steps > OK.



Understanding Errors

- **####** in a cell happens when the column is not wide enough to display the data.
- **#Div/0!Errors** in a cell happens when the formula is trying to divide a number by zero or an empty cell.
- **#Name? Error** in a cell happens when formula is not entered correctly. For example =Ave(c4:c6) is not correct spelling for this function. Instead should be =Average(c4:c6).

Headers and Footers

- Choose View > Headers and Footers.
- Use the Header/ Footer tab to add standard or custom Header and Footer.

Sorting

- Click on cells in the column you wish to sort.
- Click on the "Sort Ascending" or "Sort Descending."

Standard sorting

- Data > Sort (No blank rows in the table)
- Advanced Sorting
- Tools > Options > Custom List > Add
- Data > Sort > Options

Using Page Setup and Print

You can use the Page Setup dialog to customize the printing of your Spreadsheet.

Printing a Spreadsheet

- Choose File > Page Setup.
- Set page margins.
- Do Print Preview.
- Print.

Where to Get Help

If you need help with your project, you may contact Help Central Office at 742-HELP.

If you need help from your instructor, you may e-mail heide.mansouri@ttu.edu.

Exercise 1

1. Click on cell **A1**, enter your name, and press the Enter key.
2. Click on cell **E1**, and press the **Ctrl + ;** (semicolon) key combination to enter the current date.
3. Click on cell **E2**, and press **Ctrl + Shift + :** (colon) to enter the current time.
4. Starting on cell **A5**, create the Computer Sales table using the given table.
5. Select columns **A** through **E**, and choose Format > Column > AutoFit Selection to change the column widths.
6. Select **A16** through **E16**, and click on Border icon on the Formatting toolbar; select the Top and Bottom border.
7. Insert a column between Column A and Column B.
8. Click on cell **B9**, and insert the comment: "Mary, this number seems to be very low. Could you please check the invoices? Thanks".

Computer Sales - Quarter 1

(January to March)

Salesperson	Monitors	Printers	Scanners	Total Sales
Sue	34	70	56	\$161,720
Frank	66	19	97	\$183,440
Mary	14	81	31	\$170,720
Nancy	38	8	70	\$178,800
Tom	29	39	87	\$203,240
Joe	89	44	78	\$170,360
Total	270	261	419	\$1,068,280

Exercise 2

On a New Worksheet:

1. Type **Interest Rate: 10%, Number of Months: 360, Loan Amount: \$80,000, Monthly Payment** in Cells B1 through B4.
2. Click on Cell C4 to select it.
3. From the main menu,
 - a. Select Insert
 - b. Function
 - c. Select the **Financial** category
 - d. Select PMT function
 - e. Click OK.
4. On the **Function Argument** dialog box, Type 10%/12 for **Rate**.
5. Type 360 for **Nper**.
6. Type 80000 (no comma, no \$ sign) for **Pv**.
7. Type 0 (zero) for **FV** (future value).
8. Type 0 (zero) for **Type**.
9. Click **OK**.

Please e-mail your comments or suggestions to: heide.mansouri@ttu.edu