

Introduction to *Microsoft Excel*

O V E R V I E W

In this lab, you will become familiar with the general layout and features of *Microsoft Excel* spreadsheet computer application. Excel has many features, but this and subsequent laboratories will focus on using Excel for conducting statistical analysis and graphing. The skills learned in this laboratory will be important for future laboratory activities.

OBJECTIVES

By the end of the laboratory, you will be able to

- Distinguish between workbooks and worksheets
- Distinguish between rows and columns
- Distinguish between text, numerical values and formulas
- Use Excel as a calculator for computations
- Use formulas to conduct simple arithmetic operations
- Save files
- Print worksheet

EQUIPMENT

- PC with *Microsoft Excel 97* or higher
- Computer diskette to save files

NOTE

- There may be small differences in procedures between different versions of Excel.

B A C K G R O U N D M A T E R I A L

Excel is a spreadsheet software application. It can be used for calculating arithmetic operations. Spreadsheets are particularly useful for working with large quantities of data and repetitive calculating activities. *Excel* has built in functions to make calculating easier for the user. Spreadsheet computer applications such as *Excel* also have the ability to generate professional looking graphs and charts. These graphs can then be used in word-processed reports and presentations. *Excel* is relatively easy to use once you know a few fundamentals.



Excel/Lesson

Note: The computer icon, , indicates you will need to complete the procedures on the computer. The book icon, , indicates that you will need to read the information.

OPENING EXCEL IN WINDOW 95, 98 OR NT



Open *Excel* following the steps below.

- Press the **Start button** in the bottom left hand corner of the screen.
- Select **Programs >Microsoft Excel**
- *Excel* will open.

GENERAL LAYOUT



When you first open *Excel*, you will see a grid of rows and columns along with three tabs near the bottom of the sheet labeled Sheet1, 2 and 3.

Rows vs. Columns

- **Rows:** On the left-hand side of the screen, you see numbers, starting at one, in gray boxes. These are the row numbers. **Rows go across.**
- **Columns:** Immediately above the grid, there are letters, starting at A, in gray boxes. These numbers are the column names. **Columns go down.**
- **Cells:** The intersection of a single row and a single column is called a cell. The cell is named by the column letter followed by row number. For example, the top left most cell is called **A1**, since it is the intersection of column A and row 1. Notice:

Workbooks vs. Worksheets

- **Worksheets:** The grid area with rows and columns is called a worksheet.
- **Worksheet name:** The name of the worksheet is on the bottom tab. The current sheet is named *Sheet 1*. This name can be changed.

Introduction to Excel

- **Workbook:** A workbook is the group of all of the worksheets within one file. The file name is the name of the workbook. You can name the file when you save it.

CELL ENTRY TYPES



- **Numerical:** Numerical data is the only type *Excel* will use for statistical calculations. Numerical data is aligned on the right side of the column. Numerical data can be formatted, for example, to a specified number of decimal places.
- **Text:** Text **cannot** be used for computations. Text entries are aligned on the left side of the cell. Though “text” generally means words or characters, numbers can be classified as text. To represent a number as text, put an apostrophe before the number. (For example, '3, will be entered as 3 and will be left justified as text.)
- **Formulas:** Formulas can be used to calculate based on values in other cells of the spreadsheet. This type of operation can also be used as a calculator to make calculations with numbers. The **equal sign** before a number indicates to Excel, that you want it to calculate. (For examine, =3+4, will produce a 7 in the cell. While 3+4 will leave 3+4 in the cell as text.)

ENTERING DATA



You can enter your data in columns or rows.

- Pressing the **Enter** key will move your cursor to the next row, keeping it in the same column.
- To move the cursor to the next column while staying in the same row, use the right cursor key.



Follow the instructions below.

1. **Entering text.**
 - Put your cursor in cell **A1** and **type your full name**.
 - Press Enter. Your cursor should be in cell A2.
 - If you are working with a partner, put the partner's name in cell A2.
 2. **Formatting column width:** The length of your name is probably longer than the width of column A. To change the column width to fit your name
- Put your cursor back on cell A1. (i.e. Select your name.)

Introduction to Excel

- From the main menu, select **Format > Column > AutoFit Selection**
 - The column width should change to fit your name.
3. **Entering numbers.**
- Put your cursor in cell **C1** and type *Numbers*.
 - Press enter. (Your cursor should be in C2.)
 - Type **3**. Press enter. The 3 should be right justified.
 - Put your cursor in cell **D1** and type *Not Numbers*. Press enter. (Adjust width of column to fit the words.)
 - Type **'3**. Press enter. The 3 should be left justified. Excel thinks that entry is text.
4. **Entering Numerical Calculations.**
- In cell **F1**, type **Calculations**. Press enter. Adjust the column width to fit the selection. (The shortcut for this is to grab the "bar" between the column names F and E and slide the bar to the right until it is the side you want it.)
 - In cell **F2**, type **3+4**. Press enter. (The 3+4 should appear to the left of the cell.)
 - In cell **F3**, type **=3+4**. Press enter. (The number 7 should appear on the right of the cell. The equal sign before the 3 told Excel to calculate.)
5. **Entering Formula.** The formula will double the value of the cell C2.
- In cell **C4**, type **Formulas**. Press enter.
 - In cell **C5**, type **=2*** now click on cell C2. (It should say **=2*C2** in the cell.) Press enter. (The number 6 should appear in the cell.)
6. **Changing Values in a Formula.**
- Change the number in cell C2 from 3 to 4. Press enter.
 - The value in cell **C5** should automatically update to the number 8 to reflect the change. (remember the formula in cell C5 is to find twice the value in cell C2.)
 - Change the number in cell C2 from 4 to 5. Press enter. (The new value of C5 should be 10.)
7. **Saving your workbook.**
- Put your floppy disk in drive A.
 - From the main menu, select **File>Save As**.
 - In the Save As dialog box, **click the down arrow** next the Save in field.
 - Select **3 1/2 Floppy (A:)**
- In the **File name** field, type **ExcelLab1**
 - Click **Save**.
8. **Check your work.**
- Compare your Excel file with the entries in Table 1 (on the next page). If there are any mistakes go back to the corresponding instructions and make the appropriate changes.
9. **Printing.**
- Select **File>Print**. Click **OK**.
10. **Close the file and exit Excel.**
- Save your work once more. Select **File>Save**. (The short cut it the save icon that looks like a diskette.)

Introduction to Excel

- Once your work is saved, select **File>Close**.
- Select **File>Exit**.

Table 1. Check Your Work with the Table Below.

	A	B	C	D	E	F
1	Ginger Holmes Rowell		Numbers	Not Numbers		Calculations
2			5	3		3+4
3						7
4			Formula			
5				10		

Helpful Information:

Most symbols for calculating are what you would think. However, this list might be a helpful reference.

Operation	Symbol to type	Example
Add	+	3+4
Subtract	-	3-4
Multiply	*	3*4
Divide	/	3/4
Exponent	^	3^4 (3 raised to the 4 th power.)