INTERMEDIATE EXCEL

This document is for those who already know the basics of spreadsheets and have worked with either Excel for Windows or Excel for Macintosh. Many features of Excel are similar on both platforms, so this document will be helpful for both. However, it is written specifically for Excel 7.0. This document also describes how to execute procedures in Excel by using the pull-down menus. As you gain experience with the program, you will become familiar with the shortcut buttons as well.

By “Intermediate Excel,” we refer to those functions of Excel that go beyond simple spreadsheet creation and management. Microsoft has built into this package many advanced capabilities that greatly enhance your ability to input, manipulate, and present information. If you have basic questions that are not covered here, please see the “Introduction to Excel” document. We also recommend that you use Excel’s on-line help feature and the Excel manuals.

Formatting your Spreadsheet

While the basic formatting commands were covered in “Introduction to Excel,” the software does allow you to go significantly further in making your spreadsheet more attractive and easier to read.

Using the Format Menu:

**Format Cells** - Allows you to control cell borders, colors, patterns, number format, alignment, and data protection.

**AutoFormat** - Allows you to select a pre-designed format for tables.

**Style** - Allows you to specify a combination of formats for selected cells.
Format Cells - Borders
Borders are useful for drawing attention to a particular row, column or cell. Borders are different from gridlines. By hiding the gridlines (see below), you can make borders and shading stand out on your screen.

Note: Adjoining cells share borders. Therefore, putting a bottom border on one cell produces the same effect as putting a top border on the cell below it.

To make borders, select the cells for which you would like a border. Choose the Format Cells command, and then click on the tab called Border. Excel displays these options:

**Border** - Allows you to select whether you want an outline border (a box) or simply a line on one or several sided.

**Style** - Allows you to border select line type - thin, thick double, etc.

**Color** - Sets the border line color. (In most cases, it is best to use the default black).

Format Cells - Patterns
This command is also useful for calling attention to a particular row, column, or cell. Shading the cell in gray or even in zebra stripes makes it much more noticeable.

Warning: Make sure that your pattern does not make it difficult to read the content of your spreadsheet.
To add a pattern, select the cells for which you would like the pattern to fill. Choose the Format Cells command, and then click on the tab called Patterns. Excel displays these options:

Format - Style
With Excel, you can specify a combination of formats for a cell and then apply them all at once. After you have a style defined, you can use it in many different places within your worksheet. To define a style, select the Format Style command. A dialog box will pop up which looks like this:

![Style dialog box]

Give the new style the name of your choice, then click Modify. You will have the opportunity to format the number appearance, alignment, font, borders, patterns, and protection for your new style. When the style has been designed to your satisfaction, click on Add.

From now on, you can use your new style to apply your formatting choices to any part of your spreadsheet. Simply select the desired cells, then go to Format Style, and use the pull down arrow to find the name of your new style on the list. There are a number of default styles included in Excel to facilitate spreadsheet formatting, such as Percent and Currency.

Once styles have been created in one workbook, you can easily bring them into another. Let’s say, for example, that you had created several styles in workbook BUDGET that you would also like to use in workbook FINANCE. Open both workbooks. While in FINANCE, use the Format Style command, then click on Merge. Select BUDGET from the list of available workbook names, and the BUDGET style names are now part of the FINANCE workbook.
Autoformat

Excel has created several general formats to apply to a table of cells. Select all the cells in your table, then choose Format Autoformat. A menu will pop up that looks like the following:

![Autoformat screenshot]

On the left is a list of common table formats. As you select each format style, an example will be displayed in the center. (In the above demonstration, the “Simple” format is being displayed). When you find the style you prefer, click on the OK button.

Format Painter

The format painter provides another way to complete quick formatting tasks. Use format painter if you simply want to copy all the formatting from one cell or range of cells to another location, but do not want to create a permanent style. The Format Painter can be accessed only via the Standard Toolbar, and it looks like this:

Select the cells that contain the formatting you wish to copy, then click the Format Painter button.

Next, click on the cells you want to format. Excel will copy all formatting to the new location, including number appearance, fonts, borders, etc.

File - Page Setup

Many of the commands used to format your worksheet are actually accessed by going to the File menu, Page Setup command. You will see a dialog box that looks like the one below. Notice that you can alter four different aspects of the page setup, by clicking on the Page, Margins, Header/Footer, or Sheet tabs.

![Page Setup screenshot]
Group Editing of Worksheets

It is possible to perform the same formatting or editing operations on more than one worksheet at a time. First, select the worksheets that you want to edit by clicking on their worksheet tabs, located at the bottom of the screen. Hold down the CTRL key to allow you to select more than one at a time. You will notice that the word “Group” appears in the Title Bar at the top of the spreadsheet. You can then proceed to format or edit as you wish—the changes will appear on every worksheet you have selected.

When you are finished editing, you must “ungroup” the worksheets. You can do this by clicking on one of their tabs with the right mouse button. On the menu that pops up, choose Ungroup Sheets. This will allow you to again work with the worksheets one by one.

The Basics of Graphs and Charts

Before starting this section, you should be aware of the fact that the graph and chart capabilities of Excel are extensive, and could almost be considered an entirely separate program. This handout will get you started. You can then refer to Excel’s on-line help or manuals for more information.

To make a chart, you first need a spreadsheet and data. Put your data into the spreadsheet, then highlight the cells containing the information that you would like to see presented graphically. At this point, you can begin to use the Chart Wizard.

Go to the Insert menu and choose Chart. This will launch the Chart Wizard. Or, simply click on the Chart Wizard icon, which is on the Standard Toolbar, and looks like this:

Your cursor will now be transformed from an arrow to a cross hair. Click and drag this cross-hair across your worksheet - it’s not particularly important where, because you can change the chart location later. When you let go, a dialog box will come up, which will lead you through the five-step process of creating a chart. Carefully follow the instructions guiding you and click on Next when you have completed each step. As an example, Step 2 of the process is shown below:
When you reach Steps 4 and 5, you will see a small display on the left that is meant to serve as a sample. Do not worry if it does not look exactly like you want the final version to look.

When you have finished the last step, you will be returned to your worksheet. The chart will be located in a small graphic box somewhere on the spreadsheet, wherever you dragged the cross-hair cursor.

To edit your chart, double click on it. You will then enter the Excel Charting Module - you can note this change because the pull-down menus will be different. The Insert and Format menus in this Module contain functions that are especially useful for editing. Your screen will now look something like this:

Once you are in the Excel Charting Module, you can edit any of the specific chart elements by double clicking on them. Generally, a dialog box will pop up allowing you to change the font, point size, scale, color, pattern, shape, etc. For example, if you wanted to make the legend 14 pt Avant Garde, you could double click the Legend, select Font, make the appropriate adjustments, and click OK.
Linking Worksheets

With Excel, you can dynamically link separate worksheets, either within a workbook or between workbooks. Any changes you make in one worksheet are automatically reflected in any other worksheets that are linked to it. Linking is especially convenient for managing formulas that utilize data from more than one worksheet. A classic example of this comes from accounting: you can create one worksheet as an income record and a separate one for expenses, and then create a financial statement that draws totals from both. If you need to edit your income spreadsheet, your final financial statement will automatically update the totals.

Link two Excel documents by creating a formula in one document that refers to a value in the other. The linking formula contains an external reference. An external reference consists of the document name and a cell reference separated by an exclamation point.

=Worksheet2!$B$3

Like a regular internal reference formula, you always begin with “=” Then you name the supporting worksheet, put in an exclamation point (indicating an external reference), and finally the cell to which you would like to refer.

Alternatively, if you have both the income worksheet and the expenses worksheet open at the same time, you can simply type “=” and then go to the other worksheet and click in the desired cell. Excel will automatically create an external reference equation. Chart creation using external references follows the same principle.

Warning: The dollar signs ($) in the formula above indicate that this is an absolute reference. This means that the reference refers to the exact column letter and row number of the cell, so that if the cells in the supporting worksheet shift, your reference could suddenly point to a different value. If you wish to use a relative reference, in which the reference floats as cells shift, remove the dollar signs. Both reference styles have their advantages - you will need to determine which is best for your particular needs.

Note: For more information about formulas, or about worksheets vs. workbooks, please see the “Introduction to Excel” document.