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1.0 Overview

Microsoft Excel 2010® is a spreadsheet program. It allows you to create and manipulate data using a tabular format of rows and columns. You can quickly add formulas to calculate sums, averages, and other mathematical operations. Additionally, you can perform advanced mathematical, financial, and statistical calculations. You can use the chart feature to visualize your data, as a bar chart, line graph, pie, bubble chart, and many more. You can also create pivot-table, perform sub-total operations, and format your data. Just like any other Microsoft Office product, you can add pictures and other graphics to allow your data to tell a story.

Despite all the beneficial features of Microsoft Excel 2010®, these instructions only cover:

We will Cover

- Basic Excel Concepts
- Data Sources
- Data Manipulation
- Printing

These instructions assume that you are familiar with basic Excel 2010® features and functions.

1.1 Before you begin

Before you begin, you should download the companion materials. The companion materials consist of the Donations.xlsx. The instructions herein will use this document and other data to guide you in performing common tasks using Excel 2010®.

2.0 Excel 2010® Environment

The Excel 2010® environment is similar to other Microsoft Office® products. It contains the ribbon with tabs, such as File, Home, and Insert. Each tab contains groups of related functions, such as Clipboard, Font, Alignment, and Number. The groups contain collections of related features, such as Wrap Text and Merge & Center. The features perform specific tasks within Excel 2010®, such as adding Bold to text or formatting dates.
2.1 Worksheets and Workbooks

Excel 2010® uses worksheets to house your data. You can think of a worksheet as a big table of columns and rows. A worksheet allows you to work with your tabular data. Your worksheets are kept in a workbook. A workbook is no more than a collection of one (1) or more worksheets. By default, workbooks contain three (3) worksheets or spreadsheets. Spreadsheets are another name for worksheets.

For example, you may have a workbook named Grades that contains three spreadsheets: Quizzes, Midterms, and Finals. Each spreadsheet contains a table of names and grades.

2.2 Data Area

When using a worksheet, you will work with your data. Each worksheet is made up of cells in columns and rows. A column is a vertical collection of cells. The horizontal cells are rows. You can refer to cells by their column and row identifier. The columns use letters, such as D, X, or AC, for identifiers. The identifiers for rows are numbers, such as 5, 161, or 64565. To refer to the cell in column D and row 5, you would use D5.

You can perform mathematical, financial, and statistical operations on data in cells, columns, and rows. Additionally, you can format your data similarly by cell, column, or row.
2.3 Getting Started with Excel 2010®

To begin using Excel 2010®, you will need to open it. These instructions will guide in opening the application, Microsoft Excel 2010®.

### Steps

1. From your computer screen,
   - Click the button on the Start Menu
   - Click the All Programs button

2. Scroll down and click Microsoft Office

3. Click Microsoft Excel 2010

4. Microsoft Excel opens.
3.0 Working with Worksheets

Sometimes, it is easier to use more than one worksheet to present your information, as opposed to scrolling vertically or horizontally to view it. Workbooks by default contain three worksheets. Multiple spreadsheets allow you to organize your data better. When working with multiple worksheets, you may want to rename the worksheet for easier identification, delete unused worksheets, move the worksheets around, or insert new worksheets.

In this section, the instructions will guide through:

- Creating a new worksheet
- Renaming worksheets
- Moving worksheets around
- Deleting worksheets
- And inserting worksheets.

3.1 Creating a New Worksheet

Worksheets or spreadsheets are great for holding list or tables of information. You can quickly create a new worksheet to hold your tabular data. You may find it easier to create a table in Excel® and then copy and paste it to Word® or PowerPoint®. These instructions will guide you in creating a new worksheet and entering simple information, such as grades for class.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Illustrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To create a new worksheet,</td>
<td></td>
</tr>
<tr>
<td>- Click the File tab</td>
<td></td>
</tr>
<tr>
<td>2. On the File tab,</td>
<td></td>
</tr>
<tr>
<td>- Click New</td>
<td></td>
</tr>
</tbody>
</table>
3. The New window opens.
   - In the Available Templates, click the **Blank workbook** button
   - Click the **Create** button

4. Your new workbook opens.

5. Beginning in Row 1, enter the following data:
   - Names
   - Grades

6. In the Names column (A), enter the following:
   - Ethel
   - Fred
   - Lucy
   - Ricky

7. In the Grades column (B), enter the following:
   - 78
   - 93
   - 84
   - 99
8. To save your results,
   - Click File
   - Click Save

9. The Save As dialog box opens.
   - Navigate to the desired location
   - Give your workbook a meaningful name
   - Click the Save button.

10. You have successfully created and saved a new worksheet.

### 3.2 Renaming worksheets

When organizing your data in multiple worksheets, you may want to rename the worksheets for clarity. These instructions will guide you step-by-step in renaming your worksheet using the Grades spreadsheet from the previous instructions.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Illustrations</th>
</tr>
</thead>
</table>
| 1. To rename a worksheet,  
   - Right-click the worksheet tab, such as Sheet1 | ![Right-click](image) |
| 2. On the pop-up menu,  
   - Click Rename | ![Rename](image) |
3. On the tab,
   - Enter a meaningful name, such as Quizzes
   - Press the Enter key on your keyboard

4. It’s just that easy. You have successfully renamed your Sheet1 worksheet to Quizzes.

### 3.3 Moving worksheets around

Moving worksheets around is helpful, when you want the worksheets in a different order than as they appear. On large workbooks, this feature is handy because inevitably the worksheet you use most often is the last one. By moving the worksheets around, you can place them in a sequence that works best for you. You can quickly move worksheets around using the following instructions.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Illustrations</th>
</tr>
</thead>
</table>
| 1. To move a worksheet,  
   - Click and drag the worksheet tab you want to move, such as Sheet2, to the desired location, such as before the Quizzes tab. | ![Illustration of clicking and dragging](Sheet2_dragged_before_Quizzes) |
| 2. Now Sheet2 appears before Quizzes | ![Sheet2 is before Quizzes](Sheet2_before_Quizzes) |
| 3. Alternatively, you can move worksheets around using the Worksheet pop-up menu.  
   - Right-click on the worksheet tab, Sheet2 | ![Right-click](Sheet2_right-click) |
4. From the pop-up menu, select **Move or Copy**

5. On the **Move or Copy** screen,
   - Click **Sheet3**
   - Click **OK**

6. Sheet2 is back to the position from which you began.

7. You have successfully moved a worksheet using two different methods.

### 3.4 Deleting worksheets

On occasion, you may need to delete a worksheet. Using the worksheet pop-up menu, you can easily delete a worksheet. The following instruction will step you this process.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Illustrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To delete a worksheet.</td>
<td><img src="image" alt="Right-click" /></td>
</tr>
</tbody>
</table>
   - Right-click on the worksheet tab, **Sheet2**
2. From the pop-up menu, select **Delete**

3. The worksheet disappears.

4. You have successfully deleted a worksheet.

### 3.5 Inserting worksheets

Depending on the type of data you are working with, you may need additional worksheets. You can insert a worksheet just as easy as deleting one. The instruction below will guide you in inserting a worksheet.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Illustrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To insert a worksheet.</td>
<td></td>
</tr>
<tr>
<td>- Right-click on the worksheet tab, <strong>Sheet3</strong></td>
<td></td>
</tr>
<tr>
<td>2. From the pop-up menu, select <strong>Insert...</strong></td>
<td></td>
</tr>
</tbody>
</table>
3. On the Insert window,
   - Click
   - Click

4. The new worksheet appears.

5. You have successfully inserted a worksheet.

### 4.0 Working with your data

Now that you are aware of the Excel 2010® environment and the use of worksheets, you are ready to start using its features. In this section, the instructions will guide through working with your data in these three ways and other functions, such as:

- Using basic formulas
- Sorting your data
- Formatting your data
- Importing data
- Hiding and filtering columns
- Subtotaling
- Printing
4.1 Open an existing spreadsheet

In addition to creating a new worksheet, you can also use existing spreadsheets. These instructions will take you through the steps to open an existing spreadsheet.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Illustrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. While Excel is open,</td>
<td><img src="image1.png" alt="File tab" /></td>
</tr>
<tr>
<td>• Click the <strong>File</strong> tab</td>
<td><img src="image2.png" alt="Open dialog box" /></td>
</tr>
<tr>
<td>• Click <strong>Open</strong></td>
<td><img src="image3.png" alt="Workbook open" /></td>
</tr>
<tr>
<td>2. The <strong>Open</strong> dialog box opens.</td>
<td><img src="image3.png" alt="Workbook open" /></td>
</tr>
<tr>
<td>• Navigate to the desired location, such as <strong>Desktop</strong> or <strong>Documents</strong></td>
<td><img src="image3.png" alt="Workbook open" /></td>
</tr>
<tr>
<td>• Click the desired workbook, such as <strong>Donations</strong></td>
<td><img src="image3.png" alt="Workbook open" /></td>
</tr>
<tr>
<td>• Click the <strong>Open</strong> button.</td>
<td><img src="image3.png" alt="Workbook open" /></td>
</tr>
<tr>
<td>3. The <strong>Donations</strong> or your desired workbook opens.</td>
<td><img src="image3.png" alt="Workbook open" /></td>
</tr>
<tr>
<td>4. You have opened an existing workbook successfully.</td>
<td><img src="image3.png" alt="Workbook open" /></td>
</tr>
</tbody>
</table>
4.2 Using Basic Formulas

With Excel 2010®, you can use basic formulas to calculate quickly totals, averages, and other mathematical operations for data by individual cells, rows, and columns. These instructions will guide you through using addition, subtraction, and counting formulas.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Illustrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>To illustrate how to add individual cells, you will calculate the Pledged Amount for the top 3 contributors. To do this, you will enter a basic addition formula in the cell to the right of the heading, Top 3 Contributors.</td>
<td></td>
</tr>
</tbody>
</table>
| 1. To add individual cells,  
   - Click in Cell D12 |
| ![Image of Excel spreadsheet with formula in cell D12](image1) |
| 2. In cell D12,  
   - Type = I2 + I3 + I6  
   - Press Enter on your keyboard |
| ![Image of Excel spreadsheet with formula in cell D12](image2) |
| Be sure to type the formula as written, including the equal sign (=). |
| 3. Cell D12 contains the sum of the cells I2, I3, and I6  
   I2  15000000  
   I3  14000000  
   + I6  + 20000000  
   ____________  
   D12  49000000 |
| ![Image of Excel spreadsheet with formula in cell D12](image3) |
| Next, you will determine the outstanding balance for the donors. To do this, you will subtract the Amount Received (column J) from the Pledged Amount (column I) and place the results in the Outstanding Balance (column K). |
4. To determine the **Outstanding Balance**, 
   - Click in cell K2
   - In cell K2, 
     - Type \( =I2-J2 \)
     - Press Enter on your keyboard
     
     *Be sure to type the formula as written, including the equal sign (=).*

5. In cell K2, 
   - Type \( =I2-J2 \)
   - Press Enter on your keyboard
   
   **Cell K2 contains the results of I2 – J2**

\[
\begin{array}{c}
I2 \quad 15000000 \\
-\; J2 \quad -13000000 \\
K2 \quad 2000000 \\
\end{array}
\]

6. To copy the formula, 
   - Click in cell K2

7. To copy the formula, 
   - Click in cell K2

8. Click **Copy**

9. To paste the formula to Rows 3 – 8, 
   - Hold your left mouse button down in K3 and then dragging the selection window to K8.
10. Click Paste

11. Now, cells K2:K8 (K2 through K8) contain the same formula.

Next, you will total the Pledged Amount (column I), Amount Received (column J), and the Outstanding Balance (column K). To accomplish this, you will use the Sum formula for a column of values.

12. To total the Pledged Amount (column I),
   - Click in cell I9
   - Type: = SUM(
   - Highlight cells I2 through I8
   - Type: )
   - Press Enter on your keyboard

   Be sure to type the formula as written, including the equal sign, = and the parentheses, ()

13. In cell I9,
   - Type: = SUM(
   - Highlight cells I2 through I8
   - Type: )
   - Press Enter on your keyboard

   Cell I9 contains the sum of the selected numbers. In your case, it is the total pledged amount.
15. Now, you try it on your own with the Amount Received (column J) and Outstanding Balance (column K). You can either copy and paste the formulas or follow Step 13 using the appropriate columns.

Your finished results you look similar to the illustration on the right.

It might be nice to know the total number of contributors. On a small worksheet like this one, you can easily count the entries. However on a larger worksheet, counting thousands of entries may prove challenging. Excel 2010 has two formulas for counting: COUNT and COUNTA. The COUNT formula counts entries that are numbers and the COUNTA formula counts entries that contain letters.

To determine the number of contributors, you will count the First Names and place the results in the Pledge Date column. Which count formula should you use? COUNT or COUNTA (See below for the answer)

16. To count the First Names (column B),
   • Click in cell H9

17. In cell H9,
   • Type: = COUNTA( 
   • Highlight cells B2 through B8
   • Type: )
   • Press Enter on your keyboard

   Be sure to type the formula as written, including the equal sign, = and the parentheses, ( ).

18. If you used COUNTA, the total number of contribution will be seven (7) as shown on the right.

   If your results show 0, then you used COUNT instead of COUNTA.
In the next segment, you will use your results thus far to update the summary section, **Overall Statistics of Fundraiser**.

19. To update the Number of Contributors,
   - Click in cell D13
   - Type: =H9
   - Press Enter on your keyboard

20. Your results should look similar to the illustration on the right.

21. It’s your turn. Update the following:
   - **Total Amount Raised** (cell D14) with the **Pledge Amount total** (cell I9)
   - **Total Amount Received** (cell D15) with the **Pledge Amount** total (cell J9)
   - **Total Amount Outstanding** (cell D16) with the **Outstanding Balance** total (cell K9)

Your finished results should look like as illustrated.

In this last segment, you will insert a new row in your worksheet and observe how Excel automatically recalculates the values using your formulas.

22. You will begin by highlighting row 5. To do so, right-click the 5.
23. From the pop-up menu, click Insert.


25. In the new row, enter the information as illustrated below.

26. To complete the new row,
   - In the Outstanding Balance, type =I5-J5
   - In the %Received, type =K5/I5

27. Notice how the subtotals in Row 10 include the values from the new row. For example, the Number of Contributors changed from 7 to 8 because you used a formula that included all the rows.

However, the Top 3 Contributions did not change. It should contain the values from the new row. If you remember, your formula specified the cells to add (= to use I2+I3+I7). Let’s fix this formula to include the new row values.
28. In cell D13,

- Type = I2 + I5 + I7
- Press Enter on your keyboard

*Be sure to type the formula as written, including the equal sign (=).*

29. Cell D13 contains the sum of the cells I2, I5, and I7

\[
\begin{align*}
I2 & = 15000000 \\
I5 & = 60000000 \\
+ I7 & = 20000000 \\
\hline
\text{D13} & = 95000000
\end{align*}
\]

30. You have successfully used addition, subtraction, and counting formulas. Additionally, you inserted a new row and added new entries. Be sure to click Save.

### 4.3 Formatting Data

To enhance the readability of your data, you can format your data. You can change the date format to appear as a short date (6/20/2012), long date (Wednesday, June 20, 2012), or custom format, such as 20-06-12. You can display numbers as currency ($1,000.00), decimal places (1000.00), and commas (1,000). You can use pre-defined format to add color to your data. These instructions will guide you in formatting your dates as short dates, your numbers with commas, and your data with color.

**Steps** | **Illustrations**
---|---
You may have noticed that the Pledge Dates appear as numbers and not as dates. In this segment, you will format the Pledge Date using the short date format.
1. Highlight the dates in the **Pledge Date** column.

2. From the **Home** tab, click the down arrow in the **Number** group.

3. Click **Short Date** on the drop-down menu.

4. The **Pledge Dates** appear as dates.

Next, you will format the **Pledged Amount**, **Amount Received**, and the **Outstanding Balance** as numbers with commas and no decimal places.

5. Highlight the numbers in the **Pledged Amount** (column I), **Amount Received** (column J) and the **Outstanding Balance** (column K), including the Subtotals.
6. From the **Home** tab, click the **comma** in the **Number** group.

7. The commas are added to the amounts, along with two decimal places.

8. To get rid of the decimal places:
   - Click the
   - Click the a second time

9. Now, the amounts are formatted correctly.

10. Now, it’s your turn. Format the numbers in the **Overall Statistics of Fund Raiser** section, using the same steps. Your results should like the illustration on the right.

In this segment, you will format the **%Received** as a percentage.

11. Highlight the numbers in the **%Received** (column L).
12. From the **Home** tab, click the **percent sign** in the **Number** group.

13. Now, the amounts appear as percentages.

14. To add a decimal place to the percentages, click the **percent sign**.

15. Now, the amounts appear as percentages with a decimal place.

If this last segment on formatting, you will apply a pre-defined format to your data.

16. Highlight Rows 1 - 10
17. Click the button in the Styles group.

18. Click the Blue Table in the Medium section.

19. When the Format As Table window opens, click OK.

Your table appears formatted with a blue theme.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Comp</td>
<td>First Name</td>
<td>Last Name</td>
<td>Address 1</td>
<td>City</td>
<td>State</td>
<td>Zip</td>
<td>Pledge Date</td>
<td>Pledged Amount</td>
<td>Amount Received</td>
</tr>
<tr>
<td>2</td>
<td>Microsoft</td>
<td>Bill</td>
<td>Gates</td>
<td>1123 Any St</td>
<td>Redmond</td>
<td>WA</td>
<td>99999</td>
<td>6/20/2012</td>
<td>15,000,000</td>
<td>13,000,000</td>
</tr>
<tr>
<td>3</td>
<td>Apple</td>
<td>Steve</td>
<td>Wolziak</td>
<td>2233 Any St</td>
<td>Cupertino</td>
<td>CA</td>
<td>99999</td>
<td>1/15/2011</td>
<td>14,000,000</td>
<td>13,000,000</td>
</tr>
<tr>
<td>4</td>
<td>Ida</td>
<td>Noh</td>
<td>3333 Any St</td>
<td>Bakersfield</td>
<td>CA</td>
<td>99999</td>
<td>12/20/2011</td>
<td>4,000,000</td>
<td>2,500,000</td>
<td>1,500,00</td>
</tr>
<tr>
<td>5</td>
<td>Donald</td>
<td>Trump</td>
<td>123 Any St</td>
<td>NY</td>
<td>NY</td>
<td>99999</td>
<td>8/1/2010</td>
<td>60,000,000</td>
<td>59,500,000</td>
<td>500,000</td>
</tr>
<tr>
<td>6</td>
<td>Facebook</td>
<td>Mark</td>
<td>Zuckerberg</td>
<td>4444 Any St</td>
<td>Kernville</td>
<td>CA</td>
<td>99999</td>
<td>5/1/2012</td>
<td>3,000,000</td>
<td>2,000,000</td>
</tr>
<tr>
<td>7</td>
<td>Google</td>
<td>Sergey</td>
<td>Brin</td>
<td>5555 Any Street</td>
<td>Mountain</td>
<td>CA</td>
<td>99999</td>
<td>1/15/2011</td>
<td>20,000,000</td>
<td>15,000,000</td>
</tr>
<tr>
<td>8</td>
<td>George</td>
<td>Washington</td>
<td>4444 Any St</td>
<td>Kernville</td>
<td>CA</td>
<td>99999</td>
<td>12/20/2011</td>
<td>1,000,000</td>
<td>1,000,000</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>Warren</td>
<td>Harding</td>
<td>4444 Any St</td>
<td>Kernville</td>
<td>CA</td>
<td>99999</td>
<td>5/1/2012</td>
<td>2,000,000</td>
<td>1,000,000</td>
<td>1,000,00</td>
</tr>
<tr>
<td>10</td>
<td>Subtotals</td>
<td>8</td>
<td>119,000,000</td>
<td>107,000,000</td>
<td>12,000,00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

20. You have successfully formatted your dates as short dates, your numbers with commas, and your data with color.

4.4 Sorting Data

Depending on the situation, you may need to change how present your data. Perhaps, you may want the data sorted by date, name, or dollar amounts. The Excel Sort feature allows you to sort your data in many ways, ascending, descending, or using a custom format. These instructions will guide you in sorting by date, last name, pledged amount and a custom sort.
You can sort your data in number of ways. In this segment, you will sort your data by date, last name, pledged amount, outstanding balance, and custom sort.

1. Click the down arrow for **Pledge Date**

2. To sort the column in descending order so that the newer entries appear first,
   - Click **Sort Newest to Oldest**.
   - Click **OK**

3. The entry we entered today is now the first entry.

4. To alphabetize the list of contributors by last name,
   - Click the down arrow for **Last Name**
5. To sort the column in descending order so that the newer entries appear first,
   • Click **A to Z**
   • Click **OK**

6. The data is sorted by Last Name. Notice that Zuckerberg appears as the last entry.

7. To sort the data by the contributor who donated the most,
   • Click the down arrow for **Pledged Amount**

8. To sort the column in descending order so that the largest entries appear first,
   • Click **Largest to Smallest**
9. The **Pledged Amount** are sorted in descending order. However, the Subtotals were included in the process.

10. To correct this error,
   - Click the down arrow for **Pledge Amount**
   - Uncheck the –
   - Click **OK**

11. Now, the **Pledged Amount** appears correctly with the largest amounts listed first.

12. You can try sorting the **Outstanding Balance** in descending order on your own. Your results should look like the image on the right.

13. For more control over the sorting, you can use the custom sort feature. This feature helps when you want to sort by more than one column, such as pledge date and pledged amount. In this last section, you will sort your data by Pledge Date and Pledged Amount in descending order.

14. To begin you need to clear the previous sorting, highlight your table...
15. Click the **Sort & Filter** button on your ribbon

16. Click **Clear** on the pop-up menu to remove the sorting formats

17. Highlight your table again

18. Click the **Sort & Filter** button on your ribbon again

19. Click **Custom Sort...** on the pop-up menu

20. When the Sort window opens,
   - In the **Sort by**, select **Pledge Date**
   - In the **Order**, select **Oldest to Newest**
   - Click **Add Level**
21. When the new level is added,
   - In the **Then by**, select *Pledged Amount*
   - In the **Order**, select *Largest to smallest*
   - Click **OK**

22. The rows are sorted by **Pledge Date** and **Pledged Amount**

23. To correct this error,
   - Click the down arrow for **Pledge Amount**
   - Uncheck the –
   - Click **OK**

24. Now you can see that Warren Harding’s pledge amount appears after Mark Zuckerberg’s

25. You have successfully sorted your data by date, last name, pledged amount, outstanding balance, and custom sort.

4.5 More Formulas (Min, Max, and Average)

Excel has many formulas from which to choose. You can use the Min formula to display the lowest number in a group of numbers, such as the lowest pledged amount. The Max formula does the opposite; it displays the highest number out of a group of numbers, such as the highest pledged amount. The Average formula is helpful when you want to know the central tendency of a group of numbers, such as the average contribution. These instructions will step you through using the Min, Max, and Average formulas.
Excel has numerous formulas from which to choose. In this segment, you will use the Min, Max, and Average formulas to determine the **Minimum Amount Pledged, Maximum Amount Pledged, and the Average Amount Pledged.**

1. Click cell D18

2. In the formula bar:
   - Type: `=Min(I3:I10)`
   - Press Enter on your keyboard

3. The minimum amount, $1,000,000, shows in D18 as the Minimum Amount Pledged.

4. To calculate the Maximum Amount Pledged,
   - Click in D19
5. On the formula bar, click the button

6. On the Insert Function window,
   - In the Search for a function, enter maximum
   - Click Go

7. The search results will show in the Select a function box.
   - Click MAX
   - Click OK

8. When the Function Arguments window opens,
   - Click the button

9. Next
   - Highlight cells I3 to I10 in your document
   - Click the button

10. When you return to the Function Arguments window, click OK
11. The maximum amount, $60,000,000, shows in D19 as the Maximum Amount Pledged.

12. Click cell D20

13. In the formula bar:
   - Type: =Average(I3:I10)
   - Press Enter on your keyboard

14. The average amount, $14,875,000, shows in D20 as the Average Amount Pledged.

15. You have successfully uses the Min, Max, and Average formulas to determine the Minimum Amount Pledged, Maximum Amount Pledged, and the Average Amount Pledged.

4.6 Other Data Sources

You can use data from other sources with Excel. The data must be in format that Excel can understand, such as .txt, .csv, or .xls. Depending on the format, you may need to use the import wizard to maintain the data integrity. These instructions will step you through downloading data from myCSUB and opening it in Excel.
To begin, you will download student data from myCSUB, open the data in Excel, and save the data to your desktop.

1. Open your web browser of choice, such as Internet Explorer, Safari, or Firefox.

2. Click the myCSUB link

3. On the Sign In page,
   - Enter your NetId and Password
   - Click Sign In

4. From the Menu,
   - Click the CSUB Query Dashboard link
5. In the Faculty Queries section, click the **Students Enrolled – Distinct** link

   Your page may look different from the illustration on the right.

6. On the next window,
   - In the **Term**, enter 2128
   - In the **Plan**, enter CHEM
   - Click **View Results**

7. When results appear, click the Excel **Spreadsheet** link

8. When the dialog window appears
   - In the **Open with**, select *Microsoft Excel*
   - Click **OK**

9. When *Microsoft Excel* opens,
   - Click the **File** tab
   - Click **Save As**
10. On the Save As window,
- Navigate to the desired folder, such as Desktop or My Documents
- In the File name, enter a name for the file, such as students
- In the Save as type, make sure it says Excel Workbook
- Click Save

11. You will need to remove the first row of the spreadsheet. To do so,
- Right-click on the 1, to select the entire row
- Click Delete from the popup menu
- Click Save

12. You have successfully downloaded and opened a document from another data source. You only need to remove the first row, when downloading spreadsheets from the CSUB Query Dashboard.

4.7 Hiding Columns

Hiding columns is helpful when comparing data or for printing purposes. It allows you to reduce the number of columns that are visible without deleting the data. These instructions will walk you through hiding and unhiding columns.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Illustrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To hide columns, select the columns you wish to hide, such as column L (Campus) and column M (City) by dragging your mouse across the columns.</td>
<td>Drag mouse across the desired columns</td>
</tr>
</tbody>
</table>
2. With the desired columns highlighted,
   - Right-click the columns
   - Click **Hide** on the popup menu

3. The columns are now hid. Notice that the column letters go from K to N.

4. The process to unhide columns is similar. When you notice that some column letters are skipped, you can unhide the columns. To do so,
   - Highlight the columns that have skipped column letters, such as columns K and N.

5. With the desired columns highlighted,
   - Right-click the columns
   - Click **Unhide** on the popup menu
6. The hid columns are visible.

7. You have successfully hid and unhid columns.

4.8 Filtering Columns

Filtering columns allows you to reduce the rows of data that are visible without deleting the data. You can filter your data on any column. The filtering choices are based on the values found in the selected column. As such, you can quickly view the range of data in a column without scrolling through the entire document. These instructions will step you through filtering by column values and conditions.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Illustrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To activate filtering,</td>
<td></td>
</tr>
<tr>
<td>• Click anywhere in your spreadsheet</td>
<td></td>
</tr>
<tr>
<td>• Click the button</td>
<td></td>
</tr>
<tr>
<td>2. On the popup menu, click Filter</td>
<td></td>
</tr>
<tr>
<td>3. All the columns have drop-down arrow.</td>
<td></td>
</tr>
</tbody>
</table>
4. By adding the filtering, you can filter on any field in your spreadsheet. To illustrate filtering, you filter your results to show only the students with the Sub-plan, BIOC_BS_B
   - Click the down arrow for Sub-plan
   - Uncheck the Select All
   - Check BIOC_BS_B

5. Your data only shows the students that have the Sub-plan, BIOC_BS_B.
   Notice the Filter symbol in column D, Sub-Plan indicating that the column is filtered.

6. You can also filter your data on blank entries. For example, you may want to see only students with an Acad Plan of CHEM_BS_B and no Sub-plan. To illustrate this,
   - Click the button

7. On the popup menu, click Clear to clear the previous filters.

8. For the Sub-plan,
   - Click the down arrow
   - Uncheck Select All
   - Check Blanks
   - Click OK
9. Your spreadsheet shows only the students with an Acad Plan of CHEM_BS_B and no Sub-plan.

10. You can also filter your data using more than one criteria. For example, you can filter your data to show only student with a GPA over 3.0 and Total Units over 160.000. To illustrate this example,
   - Click the button

11. On the popup menu, click Clear to clear the previous filters.

12. For the Total Units,
   - Click the down arrow
   - Click Number Filters
   - Click Greater Than Or Equal To...

13. On the Custom Auto Filter
   - In Total Units, enter the desired value, such as 160
   - Click OK
14. For the **Cum GPA**,
   - Click the down arrow
   - Click **Number Filters**
   - Click **Greater Than Or Equal To…**

15. On the **Custom Auto Filter**
   - In **CSUB Cum GPA**, enter the desired value, such as **3.0**
   - Click **OK**

16. Your data shows only students with GPAs over 3.0 and Total Units over 160.

17. You have successfully used filters to filter your data on Sub-plans using a specific criteria and blanks. Additionally, you filtered your data using more than one criteria, such as Total Units over 160 and GPA over 3.0.

### 4.9 Sub-totaling

When working with numerical data, such as student GPA, units, or financial data, such as budgets, you may want to have certain rows of information subtotaled. On a small worksheet, this is not a problem. However, on spreadsheets with hundreds or thousands of rows, it can be time-consuming. The Subtotal feature in Excel saves you time by automatically adding rows of data based on specified criteria. To work effectively, you should sort your data first. These instructions will assist you with sorting your data, specifying criteria, and subtotaling data.
<table>
<thead>
<tr>
<th>Steps</th>
<th>Illustrations</th>
</tr>
</thead>
</table>
| 1. To illustrate subtotaling, you will count the number of students for each Sub-plan. To begin,  
   - Click anywhere in your spreadsheet  
   - Click the \( \sum \) button | ![Subtotal Illustration](image1) |
| 2. On the popup menu, click **Clear** to clear the previous filters. | ![Clear Illustration](image2) |
| 3. Next, you will sort the data by Plan, Sub-Plan, and Name. To do so,  
   - Click the \( \sum \) button | ![Sort Illustration](image3) |
| 4. Click **Custom Sort…** on the pop-up menu | ![Custom Sort Illustration](image4) |
| 5. When the **Sort** window opens,  
   - In the **Sort by**, select **Acad Plan**  
   - In the **Order**, select **A to Z**  
   - Click | ![Sort Window Illustration](image5) |
| 6. On the new row,  
   - In the **Then by**, select **Sub-Plan**  
   - In the **Order**, select **Sort A to Z**  
   - Click | ![New Row Illustration](image6) |
7. On the new row, 
   - In the **Then Sort by**, select **Name**
   - In the **Order**, select **Sort A to Z**
   - Click **OK**

8. The students are sorted by Acad Plan, Sub-Plan, and Name.

9. To subtotal the student by Sub-Plan, 
   - Click the **Data** tab 
   - Click the **Subtotal** button

10. On the **Subtotal** page, 
    - In the **At each change in**, select **Sub-Plan** 
    - In the **Use function**, select **Count** 
    - In the **Add subtotal to**, check **Sub-Plan** 
    - Click **OK**

11. Your data shows the number of students for each Sub-Plan. Notice that the students without Sub-plans were not subtotaled. However, they were included in the grand total.
12. You have successfully used subtotaled your data.

### 4.10 Printing

Once spreadsheet is complete, you may want to print it out. You can control how your data prints by specifying titles, headers, footers, and the print area. These instructions help you using common print configurations.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Illustrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To begin,</td>
<td><img src="image1" alt="Page Layout" /></td>
</tr>
<tr>
<td>• Click the Page Layout tab</td>
<td></td>
</tr>
<tr>
<td>• Click the Orientation button</td>
<td></td>
</tr>
<tr>
<td>• Click Landscape</td>
<td></td>
</tr>
<tr>
<td>2. Highlight the columns you wanted printed, such as A2:M47</td>
<td><img src="image2" alt="Highlights" /></td>
</tr>
<tr>
<td>3. On the Page Layout tab,</td>
<td><img src="image3" alt="Page Layout" /></td>
</tr>
<tr>
<td>• Click Print Area</td>
<td></td>
</tr>
<tr>
<td>• Click Set Print Area</td>
<td></td>
</tr>
<tr>
<td>4. On the Page Layout tab,</td>
<td><img src="image4" alt="Page Layout" /></td>
</tr>
<tr>
<td>• Click Print Titles</td>
<td></td>
</tr>
<tr>
<td>5. When the Page Setup page opens,</td>
<td><img src="image5" alt="Page Layout" /></td>
</tr>
<tr>
<td>• Click the Header/Footer tab</td>
<td></td>
</tr>
</tbody>
</table>
6. On the Header/Footer page,
   - Click Customer Header...

7. The Header page opens showing the three areas: left section, center section, right section.
   - In the Center section, type a report title for your spreadsheet, such as Student Data – Fall 2012
   - Click OK

8. In the Footer,
   - use the drop down arrow to select the entry that shows your name followed by Page 1 and the date, such as Warren Harding, Page 1, 10/29/2012
   - Click OK

9. On the Page Layout tab,
   - Click Print Titles

10. On the Sheet tab,
    - Click the button for the Rows to repeat at top.
11. When the Page Setup – Rows to repeat at top,
   - Highlight row 1
   - Click the button

12. When the Page Setup page reappears,
   - Click the Print Preview button.

13. The Print Preview windows appears with your report. Use the arrows at the bottom to page through your report. Notice that the column heading appear on every page.

14. You have successfully customized your spreadsheet to include titles, repeat column headings on every page, as well as include date and page numbers.
5.0 Where to get more information

GCFLearnFree.org® is a division of Goodwill Industries. Their website provides step-by-step instructions and videos on how to use Microsoft Word and many other applications. You can get more information about the Word features covered in this document at:

http://www.gcflearnfree.org/excel2010

Excel 2010® Environment
• Lesson 1: Getting Started with Excel
• Lesson 7: Worksheet Basics

Working with your data
• Lesson 10: Working with Basic Functions
• Lesson 11: Sorting Data
• Lesson 12: Outlining Data
• Lesson 13: Filtering Data
• Lesson 14: Formatting Tables
• Lesson 8: Printing