ENR 161 Fall 2017

Excel Chapter 1 Homework

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Step 1:

Watch the Video Entitled, **ENR161 Ch01 Quickstart F16**, this video is stored on the M drive at MCC. You may also access this video on **youtube.com** by entering **ENR161 Ch01 Quickstart F16** into the youtube.com search box.

Step 2:

Complete the questions below.

1. What is the difference between an Excel Workbook and a Worksheet?

2. List the steps needed to rename a cell in Excel.

3. Describe what the scope of a named cell means.

4. List the steps for pasting a formula next to a calculated cell so that when the sheet is printed the reader can view the formula.

5. Why is it a poor practice to type in a numerical value into a formula? What is the mark of a well-constructed spreadsheet?

**Grade for Questions (0-10)** \_\_\_\_\_\_\_\_\_\_\_\_\_

Step 3:

Watch the video entitled, **ENR161 CH01 HW F16** which is stored on the M drive at MCC or on **youtube.com** by entering **ENR161 Ch01 F16** into the youtube.com search box.

Step 4:

Using the video and your textbook complete the following spreadsheets and store all your sheets in a single Excel File named ENR161 CH01 HW *Wadach\* .* (\* Use your name in place of Wadach). After checking each spreadsheet your instructor will enter a stamp (worth 10 points) or enter a numerical value from 0 to 10 points.

**Problem Stamp or Grade**

**Pages 18-34, Velocity Worksheet** \_\_\_\_\_\_\_\_\_\_\_\_\_

Name the worksheet **Velocity**. Be sure to name the **ConvFactor** cell.

Starting with Ex 1.1 on page 18, follow the instructions through Fig 1.45 on page 34 but

skip Ex. 1.3 on page 24 and the Fluid Statics Application on pages 27 and 28.

**Page 24, Ex 1.3, Date Worksheet** \_\_\_\_\_\_\_\_\_\_\_\_\_

Name the worksheet **Date**.

Be sure to add your MCC class schedule as shown in the movie.

**Page 51, Problem 1.1, Average Worksheet** \_\_\_\_\_\_\_\_\_\_\_\_\_

Name the worksheet **Average**.

To subscript a character for the **AVG1:** and **AVG2:** headings, click on the **Home** tab

then expand the **Font** box by clicking on the small arrow in the lower right hand side

of the **Font** box.

**Page 52, Problem 1.2, mph-kph Worksheet** \_\_\_\_\_\_\_\_\_\_\_\_\_

Name the worksheet **mph-kph**.

Name cell C3 **MILESperKM.** Use the fill handle for all columns. To increment the fill

in units of 10, select the cells with 10 and 20 then drag the fill handle in the 20 cell down.

**Pages 52-53, Problem 1.3, Lighting Worksheet** \_\_\_\_\_\_\_\_\_\_\_\_\_

Name the worksheet **Lighting**.

Add the following two rows to the bottom of the Specified Information table as shown below.



Name the Air Heat Capacity cell, **Cp**. Use descriptive names of your choice

for the other cells in the Specified Information table.

You may modify the Calculated Information table by deleting the Total Bulb

Power Lost as Heat in units of **W** row because 1W=1 joule/sec.

Name the Total Bulb Energy Lost as Heat Cell, **Q**, and the Garage Air Mass

as, **M**. Use descriptive names of your choice for all the other cells in the

Calculated Information table.

All calculated values must be found using Excel formulas using descriptive names.

Cell references such as D6 must not be contained in your formulas.

Useful Formulas: (units are shown in parenthesis)

**Energy**(J) = **Power**(J/s) \* **Time**(s)

**Mass**(kg) = **Density**(kg/m3) \* **Volume**(m3)

**ΔT**(K) = **Q**(J) / [ (**M**(kg) \* **Cp**(J/(kg K) ]

**Page 54, Problem 1.5, Phone Worksheet** \_\_\_\_\_\_\_\_\_\_\_\_\_

Name the worksheet **Phone**.

The Paid column and Total Cost columns must contain formulas (don’t just type in numbers).

In the Paid column, use Excel’s **IF** function to compute the minutes that Anna must pay for. You will need this because if Anna uses less than the allowed number of minutes the paid value should be zero and not a negative number.

Click on the “**?**” in the top right corner of the Excel window to open the Help screen. Type in **IF** and click on **search** to see instructions and examples of how to use the IF function.

Complete Plan 1 and then use the Copy and Paste functions for Plans 2 and 3 and then input the new Access Fees, Anytime Minutes, and Costs.

**Note:** For Plan 3 you must use a formula to compute the Allowed Free value for the Text Messages. For text messages, Allowed Free = (Anytime Allowed Free – Anna’s Expected Anytime Usage). As above, use an IF function to be sure that a negative number will never appear in the Allowed Free column for text messages.

Notes