ENGR 0011 – Fall 2018
Project 1

Acceptable behaviors for this assignment include:

- Consulting your textbook or other written material
- Asking your team members
- Asking your professor or TA

Note that consulting materials and asking others is only acceptable as long as they do not provide you with the solutions – you have to come to the solution on your own!

Unacceptable behaviors for this assignment include:

- Copying the solution(s) from a solution manual, book, or other written material
- Copying the solutions(s) from assignments submitted in previous semesters
- Providing the solutions to a classmate, student in other section, student in future section, or online solution banks
- Asking someone to complete the assignment for you

Due date: October 23

The purpose of this project is to use the Excel tools you have learned to analyze data, present data, and draw conclusions. There are four data sets posted on CourseWeb: (1) Consumption, per Month, (2) Consumption, per Year, (3) Production, per Month, and (4) Production, per Year. The files refer to the consumption and production of energy, by different energy sources. Your instructor will assign you two energy sources for your team to compare. Once you know your assigned sources, you need to go to the appropriate file and use the appropriate data. You will use the data to complete the instructions below.

You have been asked by a client to provide basic information about the data and to create a model that can be used to predict outcomes. In addition, you have been asked to visually represent the data and the model and explain your conclusions. Finally, you will need to compare results from the first data set to the second.

Sheet 1: Name Sheet 1 "Background Information". The purpose of Sheet 1 is to provide brief background information on the context. In 1-2 paragraphs, and including at least two references, provide some context and information on the energy sources you have been assigned. Also, provide your data.

Sheet 2: Name Sheet 2 "Analyses 1" and follow the instructions below on the first energy source.

a. Format the data in a professional, organized manner.
b. Find and present the minimum, maximum, average, standard deviation, and median.
c. You need to find a model (line, or equation, of best fit) that best represents the data. Show three different models (include plot, trendline, and equation for each).
d. Make sure your plots have titles and labels.
e. Indicate which model best describes the data, and why you consider this to be the best model.

Sheet 3: Name Sheet 3 "Analyses 2" and follow the instructions below on the second energy source.

a. Format the data in a professional, organized manner.
b. Find and present the minimum, maximum, average, standard deviation, and median.
c. You need to find a model (line, or equation, of best fit) that best represents the data. Show three different models (include plot, trendline, and equation for each).
d. Make sure your plots have titles and labels.
e. Indicate which model best describes the data, and why you consider this to be the best model.

Sheet 4: Name Sheet 4 "Comparison" and follow the instructions below.

a. Prepare a neat and professional table where you compare the statistical results for both data sets. Write down your conclusions under the table.
b. Include scatter plots of both data sets, side by side. Write down your conclusions.

This is a team assignment. Upload the Excel file through your class computer using the official file submission link (found on the desktop of class computers in GSCC 138 or BEH 229 at the beginning of the class when this assignment is due). The file should be named Project1_TeamName (e.g. Project1_L03).