CIVL 1112 – Assignment #10

Name: _____

Objective

The purpose of this assignment is twofold. First, continue to develop your skills in applying spreadsheets to civil engineering applications. Second, you can use the spreadsheet to help you analyze your water filter experiments.

You must hand in the coversheet for the assignment, a printout of the spreadsheet for Part 1, and your calculations for Part 2. Also, submit your Excel file for Part 1 to the Dropbox in Canvas.

Part 1: Develop a spreadsheet to compute the efficiency of the water filters constructed in the lab. The information in yellow is the input data. The results of your spreadsheet are the values printed in green. Your spreadsheet should resemble the one below. Verify the results of your spreadsheet against the data listed below and perform hand calculations using the filtered data you collected in the lab. Click here for the template.

Pat Student
CIVL 1101 - Civil Engineering Measurements
Assignment #10

Initial NTU: 100

time (min)	Flowrate (ml/min)	Turbidity (NTU)	V (ml)	Average Turbidity (NTU)
0	1,000	5	---	---
5	1,000	4	5,000	0.39
10	1,000	4	5,000	0.35
15	1,000	4	5,000	0.35
20	1,000	3	5,000	0.30
25	1,000	3	5,000	0.26
30	1,000	3	5,000	0.26
35	900	2	5,000	0.22
40	900	2	4,500	0.16
45	900	2	4,500	0.16
50	900	2	4,500	0.16
55	900	2	4,500	0.16
60	---	4	4,500	0.23
		Sum	57,500	2.99

%Turbidity (NTU) Removed	97.0%

Filter Efficieny	55,780

Assignment 10

Part 2: Compute your current grade in the class using the information in the syllabus.

Part 3: Complete and submit the Project #2 Survey.

Part 4: Read Chapter 10 in the Strategies for Creative Problem Solving by Fogler and LeBlanc.