

ENVE 204 ENGINEERING HYDRAULICS

COMPUTER PROJECT -3

PROGRAM TO COMPUTE WATER SURFACE PROFILE IN A RECTANGULAR OPEN CHANNEL USING THE STANDARD STEP METHOD

Deadline of the Project: 05/20/2018 (Friday) (till 23:59)

Program will be written in MS Excel or in Visual Basics and will **determine the water surface profile using the standard step method**

Inputs : total length of the channel, width of the channel, steady state flowrate, channel material, slope of the channel, a known water depth in the channel

Program should calculate the followings;

- normal depth
- critical depth
- froude number
- flow classification (subcritical, critical or supercritical flow)
- determine the gradually varied flow classification (M1, S2 etc)

“All calculations should be given in a tabular form (please refer to Table 6.4(a) in Hwang 4th edition for the format)”

Program should ask the units of the problem (SI or British Units) and should make necessary conversion in the calculations and formulas.

You will submit the program by e-mail to the following adress

hydraulicsmarmara2018@gmail.com

Name of the file should be in following form;

“ ENVE 204 COMP. PROJECT-3 (STUDENT NAME & NO)”