ENGINEERING PROJECT - ADDENDUM
CWR 4204 – Hydraulic Engineering
Spring 2025 - POINTS = 35 POINTS
Instructor: Professor Fuentes

Objective

To complete an engineering project that focuses on either design or analysis (or both) *of a hydraulic system or component of a hydraulic system*. Options include: a) Completing a clearly defined project with a practical scope in design (i.e., design of a pump station for a water supply conveyance pipeline); b) Learning the application of an(a) available computer model(s) (i.e., software) and then demonstrating its application in design; c) Based on relevant theory developing a computer model (spreadsheet(s) in MS Excel) and then demonstrating its(their) application to design; and d) Other options after discussion and approval by the Instructor (experimental plan with concept demonstration, testing and model development). *Analysis may be a component of a project if the main objective is design of a hydraulic system.*

Guidelines

Students will, *in teams* (as approved by the instructor), complete and present written and oral reports of professional quality. The written report should be 10-20 pages long, excluding appendices. Written report contents should include, at least, the following items or equivalent as applicable:

Cover Page (i.e., Title and Team Members)
Table of Contents
List of Figures
List of Tables
1. Introduction (background and justification)
2. Objective(s)
3. Theory
4. Description (any specifics of case study)
5. Methodology
6. Results and Discussion
7. Conclusions
8. Recommendations

References
Appendices (as necessary)

Deadlines

a) Project Proposal: February 24, 2025, *or earlier* in instructor's mailbox.
One page: tentative title, objective, approach, and initial list of references; all team members sign it.

b) *Written Report*: April 18, 2025, by 4:00 PM *or earlier* in instructor's mailbox. *The student must run the short paper through Turniti, Ithenticate, or equivalent and attach the report to the paper upon submittal. Students must also attest, in writing "that the paper has not been used for grading as part of academic credit to meet requirements for a degree program anywhere in the world".*
Maximum of 20 points equally based on technical content and quality of written report.

c) *Oral Presentation and Defense*: April 21, 2025 (2:15-4:15 PM)
Maximum of 15 points equally based on the effectiveness of delivery and quality of presentation. Duration: 10-15 minutes followed by questions (final number of minutes will be decided by the instructor in advance of the presentation). An electronic copy of the oral presentation must be presented to the instructor at the end of the oral presentation.

d) *Project grade will be based on both individual and team performance*. Report materials may not be returned by the instructor. Students are thus recommended to make full copies of all turned in materials.