

CWR 4204 – HYDRAULIC ENGINEERING
PROJECT - Spring 2021 - POINTS = 20/100 POINTS - DEADLINES: See below

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 or analysis or both (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 or analysis or both; c) Based on relevant theory developing a computer model (spreadsheet(s) in MS Excel) and then demonstrating its(their) application to design or analysis or both; and d) Other after discussion and approval by the Instructor.

Guidelines

Students will, *individually*, or *in teams* (if approved by the instructor) complete and present written and oral reports of professional quality. Paper 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, 2021 *or earlier* in instructor's mailbox.
One page: tentative title, objective, approach, and initial list of references; team members must sign at the bottom of the page.
- b) *Written Report*: December April 16, 2021 by 4:00 PM *or earlier* in instructor's mailbox.
Maximum of 15/100 points equally based on technical content and quality.
- c) *Oral Presentations*: April 21, 2021 (9:45AM-11:45AM)
Maximum of 5 points equally based effectiveness of delivery and quality. Duration: 10-15 minutes followed by questions (final number of minutes will be decided by the instructor in advance to the presentation). An electronic copy of the oral presentation must be presented to the instructor at the end of the oral presentation.
- d) Reports and electronic material may not be returned by the instructor. Students are thus recommended to make full copies of all turned in materials.