FULL MODEL APPLICATION - ADDENDUM to CWR 4530:
Modeling Applications in Water Resources Engineering
Application Case(s) Final Reports – Spring 2024 - POINTS = 35 POINTS
Instructor: Professor Fuentes

Objective

Students will, individually or in group, upon instructor's approval, use a model (i.e., code) in simulating a hydraulic system of their choice, in consultation with the instructor, to solve a problem [or answering a question(s)] for either analysis or design or both. The application should start with the selection of a code and a water system and problem definition; the implementation of the code should include characterization of the system, determination of required input data and completion of simulations in scenarios (i.e., alternative technical solutions and costs or both) as they may be needed to identify "best" solutions.

Guidelines

The student will complete and present written and oral reports of professional quality. Final written report should be 10-20 pages long, excluding appendices; contents should include, as appropriate, the following:

Presentation Letter
Cover Page   Theory
Team Member Contributions   Application Case(s) Description
Table of Contents   Methodology
List of Figures   Results and Discussion
List of Tables   Conclusions and Recommendations
Introduction (background, justification, objectives)   Appendices (as necessary)

Deadlines

a) Proposal: <u>one-page</u>, due electronically (PDF format) on October 3, 2024, or earlier, including the following contents:
  Title, Problem Description, Objective(s), Application Case System Description, Model Description, Most Possible Data Sources, and Relevant References (5-10).
b) Full Model Application: Progress Report (held November 7, 2024): 15-minute oral presentation, in MSPowerPoint, and 10-15 slides. A MSWord file copy must be turned in to the instructor at the end of the presentation.
c) Full Model Application: Written Report Due: December 6, 2024, *or earlier*:
  Maximum of 20 points equally based on effective use of the selected model, technical soundness and quality of report. Literature review must include, at least, three peer-reviewed journal publications or official technical reports of relevant content to the objective of the project. *The student must run the short paper through Turnitin (or equivalent software, such as iThenticate software) and attach the report to the written report on 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.*
d) Full Model Application: Oral Presentation: Final week (December 12, 2024), 5:00 - 7:00 PM.
  Maximum of 15 points equally based on organization and quality of presentation. Duration: 15-25 minutes maximum followed by a Q/A time. A CD or equivalent storage option should be presented to the instructor at the end of the presentation, including e-files of the oral presentation (in MSPowerPoint) and the written report (in MSWord). Students should keep copies of their work for copies that turned in to the instructor will not be returned.

Version 08/26/24 - Draft