

**FULL MODEL APPLICATION - ADDENDUM to CWR 5535C:
Advanced Modeling Applications in Water Resources Engineering
Application Case(s) Final Reports – Spring 2021 - POINTS = 35 POINTS
Instructor: Professor Fuentes**

Objective

Students will study and practice the implementation of several hydrologic and hydraulic computer codes in engineering analysis and design problem solving. Second, all students will, individually or in group, upon instructor's approval, use a code in an application case to a system of their choice to demonstrate their understanding of its background theory, implementing it to support analysis or design or both in engineering practice or research and development. The application case should include the selection of the system to model, its characterization, the identification of required input data and the completion of simulation of scenarios (i.e., or alternatives) as they may need to reach "best" justified conclusions and recommendations.

Guidelines

Students 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	Theory
Cover Page	Application Case(s) Description
Team Member Contributions	Methodology
Table of Contents	Results and Discussion
List of Figures	Conclusions
List of Tables	Recommendations
Introduction	Appendices (as necessary)
Objective(s)	

Deadlines

a) Proposal: one-page, due electronically (PDF format) on Friday March 9, 2021, or earlier, including the following contents:

Title, Team Members, 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 March 16, 2021): 15-minute oral presentation, in MS PowerPoint, and 10-15 slides. A MS Word file copy must be turned in to the instructor at the end of the presentation.

c) Full Model Application: Written Report Due: April 16, 2021, *or earlier*:

Maximum of 20 points equally based on effective use of the selected model, technical soundness and quality of report. Each student, working in a team, if approved, will also present the instructor a list of his/her contributions to the project. This list will be in sealed envelopes separate from the written report.

d) Full Model Application: Oral Presentations: Final week (April 20, 2021), 5:00PM – 7:00PM at room EC 1109.

Maximum of 15 points equally based on organization and quality of presentation. Duration: 20 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 MS PowerPoint) and the written report (in MS Word). Students should keep copies of their work for copies that turned in to the instructor will not be returned.

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