General Requirements

1. Projects will be completed by groups of two or three students. Groups of one are not permitted. Each *group* will submit one copy of the project report. Although a list of potential projects is provided, you may create a project of your own instead. The projects below are mostly based on material from the book. Alternate projects may be computational, theoretical, or experimental, but are subject to approval by Dr. Pogo.
2. You may choose your own groups before Thursday, March 9, 2023. Your group must choose a project by Thursday, March 30, 2023. Your project choice, even if it is from the list below, requires approval from Dr. Pogo.
3. Projects are due on Thursday, May 18, 2023. Hardcopies are required. Accompanying electronic work may be submitted to my inbox.

Project Grading

50% of your project grade will be determined by "correctness".
25% of your project grade will be determined by "professionalism". This includes fonts, plot sizes, plot formatting, page numbering, how you order/sequence your report, and a thousand other things.
25% of your project grade will be determined by clarity of your methods. This includes listing your assumptions, what methods you chose and why, showing example calculations, choosing the best possible plots to summarize results, and a hundred other things. Don't make me guess at what you did!
Also, projects that are listed as having lower difficulty will be graded more stringently.

Summary of Suggested Projects

The pdf file on the webpage will give more details about each suggestion.

Project #1: Reservoir level sensor

Project #2: Pump Selection

Project #3: Simple Anemometer

Project #4: Motion of a golf ball

Project #5: Municipal Water Tower

Project #6: Irrigation System

Project #7: Advanced Anemometer

Project #8: Wing Modeling using Potential Flow

Project #9: Wing Modeling using Potential Flow with Lift

Project #10: Wing Modeling using Finite Elements

Project #11: Horizontal Single-Element Towed Array Sonar

Project #12: Horizontal Multiple-Element Towed Array Sonar

Project #13: Vertical Towed Array Sonar

Project #14: Channel Flow Velocity Profile

Project #15: 2D Flow over a step with viscosity and separation.