

During the spring semester of this course, I learned a variety of topics related to scientific concepts in the field of fluid mechanics. At the start of the semester, we were assigned to create a collaborative project with the students in the educational course. The main objective of this project was to help elementary students learn the values of engineering by participating in a lesson we are presenting related to fluid mechanics topics we learned in class. The project was challenging for me when teaming with educational students to determine the fluid mechanics' concept and an engineering activity for elementary to know and understand engineering while we are currently learning. Our ideal prototype for the lesson plan project was a boat floating on water while holding weight into it which is related to buoyancy and an object's stability while floating or submerged in fluid, as we discussed in class. Regardless of the difficulty in this semester-long project, it was enjoyable when we interacted with elementary students.

The tests we did in this class were complicated to solve to understand and gain experience with fluid mechanics problems in an industrial environment. In the first test of this class, we determined the nature of the fluid as well as their properties, including viscosity and pressure, applying Bernoulli's equation and the mass of a fluid flow system and determining the pipe's size and flow rate of the flow as it fluid goes through each section of the pipe system. The second test focuses on the density and specificity of the liquid when an object is either submerged or floating the fluid, solving specific industrial problems including open channels, cavitation, and water hammer to measure fluid flow quantities and compute the magnitude, location, and direction of forces and pressures of the fluid at a specific point of the pipe. The third test focuses on pipeline systems for various configurations such as series, parallel, and network as the fluid flows through them and applies Bernoulli's equation for each open and closed pipe system.

From this course, I learned the importance of how fluid mechanics can be applied to any system that provides fluid flowing within walls and any mechanical equipment and parts that can block and open the flow that people use in everyday life. The areas that I did well in this course are understanding the system flow of the pipe by drawing and designing to see the ideal direction of the pipe flow and other interactions found within the pipe system. This course's concept will help my career as a mechanical engineering designer, where I'll conduct various technical systems such as wind turbines, HVAC, and steam engines through designing and calculating parts and equipment. I occasionally use some of the class concepts in my maintenance engineering course involving maintenance inspection on the ship's hull and pump system connected to the boat's main engine. I might use this information for my job as a mechanical engineer designer

detailing and modeling the structure of each part with their material substance and then assembling them to form a motion system to test its performance. Learning the concept of fluid mechanics helps to determine the behavior of the fluid depending on where it is flowing through and forces to help select the proper fluid for any appliances. The most common usage of the class concept is when there is massive leaking at home and some broken engine within cars that requires an oil change and fueling tank. If I retake this class, I advise myself to write down the necessary words during the course and review the slides we did in class to understand how to solve the problem carefully before taking tests and assignments.

After taking the class, I have improved a lot as an engineer by learning from my mistake by understanding how and why I make these mistakes. My biggest accomplishment in this course is by given a big presentation for the elementary students to show how we provide them with an understanding of engineering. The fluid mechanics concepts that we taught during our class helped us better understand how engineering plays a huge role in our modern society that can be improved our lives more efficiently than before. The skill I have mastered in this course is using the exemplary chart and tables for the necessary parts of each problem when doing homework and tests. My strength for this course is that I am fully committed to doing my work despite how complex the issue will be, as well as creating drawings and designing a clear paper detailing everything happening in the problems. The weakness in this course is that I have to decide what types of equations and information to solve the issues that need to be included in the problem statement that requires a further calculation to solve the main problem. Before taking this class, I was surprised to learn that the course would do a semester-long project that required being in a group and collaborating with students outside of class. I found it challenging to succeed in this course, conjuring we also have tests and homework. After completing this course, I'm starting to see why this project meant something to the children: fluid mechanics plays a vital role in operating policies, especially with fluids.