Final ePortfolio
MET 330
Fluid Mechanics
John Butler

Part 1

Persuade, both your instructor and the institution, that your work meets the objectives for this course. Discuss your learning experiences in this course, including any details that are unique to your own learning process, especially as represented by the contents of your portfolio.

Taking this course in person helped me out a ton, I feel as though I was able to learn much more effectively in a classroom environment than over a zoom course. Each class I felt that I left the building with more knowledge on Fluid mechanics and the engineering field. That's not to say that the material in this course tested me greatly and showed me how much I am capable of. While my tests scores were outstanding, I was able to learn from my mistakes and apply that knowledge onto the next assignment. I put countless hours into my homework and projects to meet the course objectives. I think I have shown my commitment to the objectives and my hard work towards this course will be rewarded.

Part 2

Answer the following questions, using links or excerpts (visual, audio, or written) from your ePortfolio to illustrate your answers:

1) **Where is your learning demonstrated in the course?**

   I was able to complete most of the Homework problems each week and this gave me the necessary practice with the concepts discussed. I felt as though I showed knowledge of the concepts in the completion of those problems. I was able to complete most of the test problems presented and provide an acceptable submission.

2) **What areas did you feel you were most successful, or improved the most?**

   I feel I was able to improve on my participation on the group project. I started of by simply completing my part of the assignment and leaving everything else to my teammates. Farther on down the line I developed more of a leadership role in the group and helped consult with many more parts of the project. I was often asked about certain things and my advice was mostly used on our final product.
   Reading the comments left on my homework solutions allowed me to adjust my problem-solving skills. Instead of looking for questions in the textbook or lectures that looked similar to the homework. I started to look deeper into the questions being asked and applying the concepts and equations discussed in class, to the homework. With this said I believe my critical thinking skills improved during the course.

3) **How do you see this course's content intersecting with your field or career?**

I desire to become a licensed engineer who is able to work on projects with confidence and be as productive as possible within a team setting.
I think this course showed me a lot about what the engineering industry is about and how it works in the real world. The Professor often referenced the industry and how certain this being taught could be different in real world application, what things to keep in mind when working on a project or solving a problem. Such as the most common values and pipes used. Also, the most reliable methods of finding a solution. It is not always A or B; the engineering field takes critical thinking a creative problem solving in order to find solutions to these dense problems.
The course group project was great experience working in a team setting. Being able to listen to other ideas and accept them even if I feel differently as well as sharing my own and being okay with them not being accepted.
Fluid Mechanics is a very important engineering concept as it applies to many things in real world application. Whether I am tasked with designing a pipe system for a building or tubing within a car to pump oil and gas to the engine. I think Bernoulli's Equation, Friction and minor losses, various measurements, drag and lift will be concepts that I use for a long time in my field.

4) **Have you been able to apply concepts you have learned in the course to what you do at work or in other courses?**

I used these concepts when working on the MET335 lab course. Knowing how to navigate and efficiently use excel was a very useful skill that I learned in the main course (MET 330). As well as multiple equations given in the lab but taught how to use in the main course.

5) **How, when, where and why you might use this information or skill in the future?**

I will use the skills learned in excel for a long time to come. It is a very useful tool for engineers for compiling data and equations. It gives otherwise scattered and difficult to understand work a more visually friendly look that allows the reader to see the information they desire more quickly. I have also used it in my personal financial life for plotting my utility bills in tables and graphs in order to keep track of my spending.
I have an internship this summer and look forward to applying my skills learned in this course.

6) **Do you think what you learn is important for your professional career?**

Yes, not only will the concepts of Fluid Mechanics be used in my Engineering career but the priceless lessons the professor taught us will help me for many years to come. Using critical thinking to solve difficult problems, looking deep into a problem to find aspects

of it that will help you formulate a solution. The value of good experience in the field is very important. His passion for the engineering field motivates and excites me for my career to come.

7) **Where do you think you will be using everything you learned?**

In my future Professional Engineering Career as a licensed Mechanical Engineering

8) If you were starting this class again, what advice would you give yourself to ensure that you had a successful semester?

Attend every lecture and ask questions when you think of them. Get an early start on the Homework and Test so that you can ask questions about it if needed and think over your answer. Do your part on the group project and be a good teammate by helping out whenever you can.

Part 3

Also answer the following questions:

1) **After taking this class, in what ways have you improved as an engineer? What brought about those improvements?**

I understand more of what it takes to be a professional engineering. The responsibility you have when working on projects. If I mess up on a project, get lazy, or even cheap it can cost lives. It gives me a sense of joy knowing that the jobs I will be working on carry so much value in their purpose.
I am much better at tabling data in excel and using this to find solutions. Using this program for the lab data and on the

2) **What was your biggest accomplishment in the course? Be specific with respect to your work and the topics you learned in the course.**

My group project was a huge success, we did a great job working as a team and presenting to the students at the end. As well as my final project assignment. I put may hours of work into this project and was able to create a reliable pipe system to transfer a fluid from a railroad tank to a storage tank.

3) **What skills did you master in this course? How are they reflected in the assignments (HW, tests, etc.) Be specific.**

I believe I can still improve in my areas of this course. I was able to become very comfortable with the use of Excel and I believe this helped me on my test and homework assignments.

4) **What do you feel are your strengths and weaknesses? Explain while making specific references to your work.**

My strength would include determination when working on these various assignments presented to me in this course. I never gave up on a problem and did everything in my power to come up with an acceptable answer. As well as my teamworking skills when working on the group project.
My weaknesses would be my calculations when working on the test. It was a struggle for me to translate the real-world application of the problem at hand into calculations used to find the desired design/answer.

5) How did you think about this course before you took it and how you think about it now that it is over? How many of your assumptions of understandings changed? Why?

I took this course last semester and was not successful however I took it again with Dr. Ayala because I believed that I could be successful with enough time and effort I could provide work that would be granted a passing grade. I have done well on the Homework, Projects and lab part of this course and had my struggles with the test. I have given this course countless hours and put everything I have into the work a present.