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. The course objectives are as follows:

After completing this course, the student should be able to:

• Describe the nature of fluids and define different fluid properties such as viscosity and pressure;

• Compute pressure and the forces (magnitude, location, and direction) associate with it in a stagnant fluid;

- Discuss what buoyancy is and determine object stability while floating or submerged in a fluid;
- Explain the fluid dynamics in pipes and fittings;
- Apply the principles of conservation of energy (Bernoulli's equation) and mass to fluid flow systems;
- Compute friction losses in pipes for a variety of configurations (series, parallel, network, etc.);

• Identify and solve for different very specific industrial problems, such as, openchannel flow, cavitation, water hammer, drag, lift, forces in pipes, and learn about different instruments to measure fluid flow quantities (such as, pressure, fluid velocity, flow velocity, etc.);

- Explain how fluid-machinery work (focused on pumps);
- Compute and select the appropriate pump for different pipe system configurations.

During this fall semester, I worked hard to understand all the topics discussed in this class. I know my grades do not show that. I have never been a good test taker. I have always been a hands-on learner and a team-oriented learner. This semester proved that the Covid-19 virus causing this global pandemic has created a lot of stress on almost everyone. I have a family, work a full-time job, and taking classes working towards my Bachelor of Science degree. I work hard in both my professional life and life outside of work. I think as a professional adult going back to school, everything is more meaningful and I am driven to work harder versus when I was finishing high school and beginning to work on my AS degree. From the beginning to the end of this semester, I can discuss viscosity and pressure in my professional life as well as daily life in all kinds of ways including the brake fluid that is used to apply pressure to a rotor to the viscosity of karo syrup that you put on pancakes. I computed pressures and forces acting on pipe systems during all the homework and lectures. I really got to understand buoyancy and stability from a MET 335W lab when we placed a boat like structure in a tub. I learned how use the fitting factors for elbows, check valves, tees to compute pipe minor losses. I was able to apply Bernoulli's equations to many problems during the lectures as well as the homework problems. Even though it was difficult, I did understand the principle behind computing the friction losses in pipe systems. I understood the open channel flow, water hammer and forces in pipes. The cavitation was harder for me to understand because it is harder to see. In our group project we decided to use drag and lift, so I was able to see and discuss with my group members to better understand. In my current career I use a lot of instrumentation, so I was able to relate a little more. In my past, I have used pumps in smaller applications. But this part of the class helped me understand more things that happens with pumps like the impeller sizing and following the chart to select the correct pump for the application. I think the best part of the class was the group work. Working with other students you hear their struggles or where they excel. You provide help or ask for help. I know the professor says to come to him/her to ask questions but sometimes it is a little intimidating because of their vast knowledge. Overall, since starting my journey with Old Dominion University this class has been the most challenging. I am a Monarch and will work as hard as I can to be an excellent example for Old Dominion University for future students.

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?

My learning came from the small number of videos we watched during some of the lectures, diagrams, charts and the lecture slides. I've always used four out of five senses to learn. Sight, Touch, Smell, and Sound.

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

Working in the group setting, and during lecture time.

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

I don't see this this course working directly in my current career. With all the things I learned I can use in the general knowledge all the topics we covered. I think the content of this course will intersect with my career mainly though 3rd party testing facilities and the customers during meetings of the product we produce for the research and lab industry.

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

Where I work, I did discuss turbulent air flow and Reynolds number on a specific project. I have used Reynold number in Heat Transfer.

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

If I was looking for a new job, I now could expand my search based on the tools and topics we learned in MET 330.

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

All of the topics we've learned are very important. You never know where your career may lead you, so having this knowledge will be beneficial.

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

Currently, I think I could use what I learned in general conversations with co-workers, and other places in my work environments.

8) If you were starting this class again, what advice would you give yourself to ensure that you had a successful semester? Study, study, study. Ask plenty of questions. Work with more students.

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 think this class helped me more with problem solving skills and to think more about the applications before trying to solve the problems.

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

I think my biggest accomplishment was being more interactive during the class lecture and with the professor. I was trying to better understand all the topics. I thought if I interacted with during the lecture time, I would be able to understand better.

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

I think my skills were mastered in the homework. The test were absolutely hard. The group project and the small project were very beneficial and shed a lot of light on the topics we've learned

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

My strengths is watching the details, my weakness is the application of the problems sometimes.

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 heard this class was hard and now I know for a fact that it is a difficult class. All of my assumptions were validated after taking this class. Overall, this was class being a challenge help me want to work harder and to be the best. It may not have shown with my grades, but I think I've become a better future engineer because of this class.

You will put this Final ePortfolio Reflective Letter in the HOME page of your personalized website.