

Final ePortfolio Reflective Letter

Gunnar Ogburn

Going into fluid mechanics I had my fears due to things I had heard from other students and even professors within the MET program. After getting into the course content, I realized I had not been lied to and that the course was going to be very challenging and also incredibly demanding. However, something I also realized that no one had told me is that the concepts themselves were all things I was already familiar with within the real world. Seeing that in this course I would be learning things that would be directly applicable to the real world and work in the engineering industry was motivating and provided me with a glimpse of confidence shining through the aforementioned fear. I already knew about viscosity and how certain fluids would flow at a faster rate than another just by their nature but, this class provided me with the tools and equations to actually apply this knowledge and put it to the test. I have spent a lot of my life on the water whether on boats or at the beach or in swimming pools. So obviously I had previous knowledge of things that would float in water and things that wouldn't. I even had a good grasp of why this was but, this class took that to the next level. I gained a much stronger grasp of buoyancy and the stability of floating objects through this course. I understood how things behaved in fluids because I had seen it my whole life, but, this course helped me understand why they behaved in these ways. A topic I did not have a lot of experience with was pipes, yes we use pipes every day when we flush our toilets, brush our teeth, or even when draining rain water off of the streets. I did not have much of an understanding of how all of this worked because most of it we never see as it is intentionally hidden for convenience and appearance sake. This course helped me realize how complex some of the pump and piping systems of cities must be. Another thing I was not entirely aware of before this class was friction when it came to fluids, in my mind friction only took place when two solid surfaces were in contact with one another. This is not the case, when a fluid is running through a pipe there is a friction force acting on the pipe and in this course we not only learned how this affects pump and piping systems but we also learned how to compute such forces and their effects. There are many other things in this world that relate to fluid mechanics all of which I have a better understanding of due to the things I learned in this course.

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

I believe my learning is best demonstrated in this course through my progress. I went into this class knowing very little and being intimidated by fluid mechanics as a whole and I am leaving it confident and refreshed.

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

I feel as if I improved the most when it came to pumps. Pumps were something that I knew very little about but, this course allowed me to become comfortable working with them and understanding everything necessary for a system to function appropriately.

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

I am still unsure where I will end up in the industry and I am intentional keeping my options open and broad, however, I believe fluid mechanics as a whole is unavoidable as it is applicable to almost everything in our everyday lives.

- 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 work at a marina with very large boats that are moved by very large forklifts. This marina also has a fuel dock with several pumps, a basin, fresh water hookups, a swimming pool, and an irrigation system that I work on and around everyday. My day to day job did not change much when it came to work but it was definitely eye-opening to see how much these topics related to the real world and it was nice to have a better understanding of how everything worked around me.

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

Like I mentioned before my path is still up in the air, but I do believe the skills I learned in this class will be applicable in any position I end up in.

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

Of course, I have already answered this but to reiterate; fluid mechanics is everywhere and avoiding it will only hurt you.

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

In any career path I decide to take and/or my life out of work.

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

Be prepared to spend extreme amounts of time on this one class.

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

A big thing I benefited from in this class was working with the education students in the project. This was one of the largest and most diverse groups I had worked in. Learning the dynamics of such a large group environment was very beneficial to me as an engineer.

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

It is hard to be specific, as I do not believe im astoundingly better at one topic than any of the others but I would say my overall confidence in problem solving and manipulating equations was strongly improved through this course.

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

I definitely am not a master yet, but this course also gave me a lot of experience in Excel. We used Excel on most of the tests and on practice problems and we used it in ways I would have never considered and in ways that I will be able to use it in the future to problem solve and simplify my work in the future.

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

A strength of mine is determination, I am not going to give up until I fully understand something but, this trait also plays into my weakness which is time management. This was the most time consuming course I have ever taken, I would start assignments very shortly after they became available and there were many times I would still be working on them even after they were due because I was not fully confident in my work in the given time.

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 or understandings changed?

Why?

I went into this course fearful and I am leaving it feeling proud. I was warned many times about this course and most of the warnings were pretty justified once I got into the content of the course. This course was very challenging and was more time consuming than all of my other classes combined. I am coming out of this course feeling proud because, I made it happen. I am leaving this course with much higher confidence in its topics than I had going into it.