**You should be now finalizing your capstone project, which needs a lot of teamwork. Are you as a team member still working in the same way as you were doing last semester? Why?** **\*BLUE**

No doubt that our work in the last period of capstone require hard work more than any period before it. We work on finishing our prototype, our test plan on our prototype, portfolio, and poster and get ready to perform well in our exhibition. Every semester i work in a new team. This helps me to gain new skills. It helps me to develop every skill like how to work in a team, accept others opinion, do my tasks completely on time. I also improve my English by searching more in English sites and gather information from verified websites. I gain a lot of experience in every situation, every dealing with someone. And to be honest, it is the most important thing in each semester that I be careful to gain it. This semester, I work hard with my team and of course the knowledge, experience and skills that I gained in the prior semesters help and play the big role in this good work we as a team perform in this semester. I think we perform well in this semester because our project has achieved our design requirements and the most important than this is that we follow the EDP steps and stick the calendar. As we change rules, we gain new skills and perform a new role which will help us in our career, like critical thinking (researcher) and quick writing (writer) and management (leader). For me I think I perform well in this semester than the last semesters as I become more helpful, agree, and discuss with my team in each idea or step logically and quietly.

**As you begin to design your poster, you must be careful to put information in the right place. For example, the results section should contain only data and graphs collected from your prototype. Where should you put data or graphs that come from research? Why is it important to separate data from these different sources?** **\*BLUE**

A poster is a summary of our project unlike portfolio which contains all the details and each step of our project. If we look to the data and information we put in the poster, we always be careful to put the data that gives the important ideas and information about our project. For example, we put our results and data collected throughout test plan in the section of results which show the judge, or any person read our poster how our project does well and achieve our design requirement. In the section of abstract and introduction we put the data collected before constructing our prototype. These data include the problem to be solved. No doubt that we search about the problem of micro plastics and how it affects the marine life badly. These data (abstract &amp; introduction) also includes the scientific base of our search, for example we first search about prior solutions. We learn more about its mechanism and how it works. Then we gather information about its disadvantages and try to modify them. So, we search how to solve this problem. And finally, we reach how our prototype would be like a team may after search about the solutions, he may get an idea out of the box. In the poster, we put the materials and its cost, pictures, source, and usage of it in our prototype. And put our methods in constructing the prototype, our test plan and how our project met our design requirements in analysis section. Then we recommend ideas can be added to the project and a conclusion of the whole project.

**Me.2.03 you learned about & work-energy theorem &** **which states that the work done by the sum of all forces acting on a particle equals the change in the kinetic energy of the particle. since removing microplastics particles from water is the main goal of your project, explain how would you remove microplastics particles from water? Describe the force/s affecting microplastic particle in water while you are removing them.** **\*GREEN**

In our project we are moving micro plastics by first stir it with a motor which makes it rotate and then can be collected by a barrier which prevented it from flowing outside the container. Then the forces acting on micro plastics is the force of motor, gravitational force, and normal force. In our situation gravitational force is cancel with the normal force and hence the only force acting on our micro plastics is the force done by the motor. So, the work as we know equals the change in kinetic energy of the water (Wnet = kef -kei) and as we know at first before turning the motor and stirring the water, kinetic energy is zero and its potential energy is maximum. But after micro plastics begins moving within water their kinetic energy increase as their velocity increase. So, we calculate the velocity that water moves with by knowing the velocity of the motor and thus we can calculate the final kinetic energy by the law (ke = 1/2 mv2) where the m is the mass of water in the device. And thus, the work done on the micro plastics equals the final kinetic energy.

**Choose one learning outcome (LO) you learned this semester that was highly related to your work in this semester’s capstone, then mention: 1- what was this LO about? In which subject? 2- why was it highly related to your w0000ork?** **\*BLUE**

In this semester we learned a lot about project through our subjects. Their concepts are related strongly with our project. But the most one help us in our project was geology. All the subject is related to sources of water, treatment, and purification of water. Especially lo4, which teaches us about ways used in the purification of water. For example, we learned about distillation, filtration, vaporization and condensation, chlorination, and many other ways. We know about chemicals and commercial materials is used in removing impurities from water such as alum which stands for aluminium sulfate. We learn about mechanisms in treating water such as it can be move through layers of sand and gravel which lock the micro plastics and prevent it from flowing. and before all of that we learned about sources of water. For example, we learned about groundwater and surface water. We learned about water supplies and how to improve the efficiency of water while using it. We also can use vaporization and condensation in removing micro plastics.