

Isabel Martinez

E.M per 3

Engineering Mechatronics 2010

This year I have to admit it was hard in deed and was definitely not as I thought, it was over my thoughts what we did in Mechatronics. My idea was that this class was going to be a physic class, but that it was going to be different in a way. As soon as the class started I know it was going to be challenging but never figured out how hard, stressful and fun it was going to be. First trimester was hard I say, but I learned many things. The main thing I learned was that in this class we need to work as a group in order to succeed in our lab projects, and that without my peers I would not be able to accomplish all the required for the given labs. The labs, class work and the homework were challenging. Sometimes they were easy but in order to get the problems we needed to scratch the surface to see what was really buried in the problem.

Going back to all our projects of the second trimester, the most challenging one for me was the Robotic lab. To understand what was going on we needed to understand what the robot was composed of. The material it used, for example the gears and torques. That made the whole project seem so difficult but at the same time exciting. Once we started building the robot we saw how many obstacles we had to overcome. The main problem was the time, getting things done by the due date was a problem and more when the work is done mainly by one person instead of a team. We finally got the robot done when we

noticed we were really behind on everything, so I had to take over and do it all myself. That was a great disappointment. I thought my team was going to be helpful, and the thing I asked my partner to do was done all wrong. I had to redo it myself. That was the hardest thing; doing the whole project mainly by myself, it's not as fun as I thought it would be. The project came thru and it was better than what I expected. I don't regret doing it by myself anymore. I think it was better that I did it the way it was done, than doing it with my partner. She was a great help in handing the pieces that will form the robot, in setting everything up for me to solder and everything else, but I did most of the work.

Another project that we did was the Hot Air Balloon project. This was a challenge because even though we were working so hard trying to get the project done by the due time we were unable to do so. We took the project home and tried to work on in as much as possible to get it done. For this project we had a group of three. This released most of the stress because of the support of our partners, but what held us back from finishing the project on time was the planning and the mathematics. We spend a lot of time on the election of the selected balloon. If we would decided which balloon we were going to use a day before we would have finished on time. The main point is that we finished and it was a great experience being able to build the balloon and seeing it float with the hot air.

The bridge was the easiest from all the projects, planning it was not so hard, what made it difficult was the mathematics, but we were able to do the bridge with no problems. I wasn't able to see the testing of our bridge but my

partner Iris informed me that we didn't do so badly, but we weren't the best. The greatest ideas don't have a good outcome at the first time most of the times. This is what I learned by this project.

The other labs were enriching in knowledge because, for example when we predicted the landing point of the metal ball we were hoping it was all right and that we didn't miss any calculation that would mislead the hypothesis and the landing failed. Our fears vanished after the testing. Our calculations were right on and the ball landed straight to the cup, we were the only team that got the landing point right on. Another group got pretty close, but ours was right on the spot.

The benefits, well I have to say I did learned how to make projects work by planning what is going to be done day by day. Besides the entire math portion we had to learn in order to accomplish our projects, I got to say it was hard learning all the mathematics of the projects and at times very confusing. Learning is a constant subject in our life that will never go away. In all this projects, overall, I learned that team work is helpful, and that we need to rely on our teammates to accomplish our goals and not be selfish and self-centered. I anticipate that all that I learned in this class will be useful when I take my physics class in college. It will help me understand it more and be able to perform better in the class. Also, helping me in any mechanical problems, mathematical problems, or anything related in engineering if I might change my degree to a branch of engineering.

After this class, I intend to apply my knowledge in my projects for MESA club, and later on in any science, or math related class in college. With all that I

have learned in this class, I believe it will help me in further comprehension in physics and math. This class has helped me develop my understanding for mechanics and mathematics as well as other aspects in my team work. I will apply my knowledge in a helpful way further in life, but right now I want to worry about the present. Humans cannot jump years, but can certainly walk through them. This means that first we need to finish what is in the present, high school, and then worry about the future, college and applied knowledge, in order to succeed.