Robert Alatorre
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Final Reflection

AMM 4810/L.01: Advanced Apparel Production, was one of the many courses that I took this semester. According to the syllabus and the course description, the objective of this class was to use processes like spreading, cutting, product assembly, and methods engineering to simulate the production of an apparel production line. From this course, we also learned how to use TUKAmark and AIMS360 to advance our knowledge of different programs commonly used in the apparel production industry. We also used Excel to complete most of our projects, where the objectives were for us to gain knowledge on how to complete different calculations that would be used in the apparel production process.

Throughout the semester, we worked on 10 total projects in groups. To start the semester, we learned how to calculate capacity in project 1. In this project, Professor Kwok emphasized the importance of calculating SAM (standard allowed minutes). We used SAM to calculate potential capacity, committed capacity, available capacity, required capacity, and excess capacity. One of the challenges that arose from this project was getting back into doing arithmetic work for school. However, after working with a group member, we were able to complete the project successfully and apply the same concepts to our next project, project 2.

In project 2, we learned about short-term production planning. We were taught how to plan short-term production on Excel, and we had to use the knowledge we learned about SAM in this assignment. We had to plan out a schedule on Excel and determine if we would be able to fulfill customer orders within their desired time frame; this assignment was not challenging but did require multiple tries to get correct.

For project 3, we learned how to do MRP calculations. To do MRP calculations, we learned how to use inventory, material usage, and lead times to plan when materials would need to be delivered. This assignment was a bit more difficult of a concept to grasp because of the number of elements that had to be considered to ensure that the planning was done correctly. After following along with the class, and practicing on my own, my partner and I were able to finish the assignment sufficiently. While we did make some minor errors, we understood the concept and the mistakes we made.

Project 4 was the technology research presentation assignment. My partner and I did our project on RFID technology, where we expanded on current RFID technology used in the apparel industry. We researched the application of RFID technology in inventory tracking in the retail space, as well as researched the application of RFID technology in the physical apparel production system (like the unit production system). With my prior knowledge of RFID technology, I was able to talk about this subject with ease and was even able to discuss the topic in-depth with the professor after the presentation.

In project 5, we used TUKAmark to create manual and automatic markers. Because I had learned in previous classes how TUKAcad and markers worked, the biggest challenge that arose from this assignment was trying to meet a low yield from creating manual markers. A lot of the smaller pieces fit well together with minimal space in between, but the larger pieces presented a bigger challenge. However, it was important to learn how to create manual markers because some companies in the industry still rely on manual markers as their main form of marker-making.

Our next project – project 6 – focused on completing a time study. For this project, we had to watch videos of garment workers and time the amount of time it took for the workers to complete an element. We used timers on our phones for precise measurements and used the numbers we gathered to determine the average amount of time it took to complete each step. We also used the numbers we found to calculate basic time (the time it takes for a cycle to be performed). The most challenging part of the assignment was using our best guess to determine the ratings of the workers since my partner, and I were unsure about what was considered a reasonable amount of time per operation. However, we were able to successfully give the workers ratings that suited them after comparing the data with each other.

Projects 7 through 10 focused on AIMS360, the last software we had to learn for the semester. For project 7, we had to create a style and cost sheet. This project wasn't difficult but following along and understanding the layout of the program took some getting used to. The professor emphasized that learning how to create a style and cost sheet was important because it shaped how the rest of the program was to be completed accurately. After creating a style and cost sheet, we learned how to create a spec sheet for project 8. To create a spec sheet, we learned how to input some of our own specs into the program and how to create a spec sheet report that only displayed the specs that were present on our products. In project 9, we learned how to add a customer order to the program, check OTS numbers, check the materials required for production, and order and receive materials. From this project, I was able to go more in-depth with AIMS360 and had to pay more attention to the professor's demos as there were more steps required to complete these tasks correctly. Lastly, we learned how to create a cut ticket, BOM, garment receive log, pick ticket, invoice, and packing slip for project 10. Like project 9, there were a lot of specific steps that we had to take to ensure that the project was completed successfully.

I learned and improved on many skills this semester that I can apply to many potential career paths in and out of the apparel industry. I learned the importance of pre-production planning to ensure production demands are met and operate smoothly without problems, such as accurately interpreting, managing, and predicting the capacity, time, and materials. I learned how to manually develop efficient markers that keep fabric consumption (yield) low and save costs while learning new software. I also gained experience using AIMS360, an ERP software, to manage various aspects of an apparel manufacturer. Overall, this course has improved my knowledge of the apparel production process, industry programs, and teamwork skills.