Standardized Panel Production Times for Automated Scheduling

Overview
Tafco manufacturing obtained a manual scheduling system in which issues would arise with proper sequencing of materials on the production floor. The times allotted for each customer order were based on prior knowledge without discrete times for each process. Analysis of the production plant was required to determine how to break down each process and associate standardized times with them.

Objectives
The team’s objectives were to create standardized times for the multitude of panels present at TMP at each major process. Time studies were performed weekly to collect as much data as possible during the semester, and these were implemented into a database that can estimate project completion times based off the quantities and types of panels required.

Approach
- Primary visit to manufacturing plant to understand how the facility runs
- Plant tour with sponsor to learn the flow of materials and where bottlenecks existed
- Discussion of methods that are currently used to schedule at TMP
- Brainstorm and Research of methods being used in present day industry to schedule production at a manufacturing plant
- Purchased proper time study equipment and created standard methods on how to take time studies
- Broke down the types of standard panels produced according to the semester schedule to ensure studies were performed on all unique panels
- Weekly site visits were performed to take time studies and compile time study data
- Built a excel database that can estimate project completion times based on panel quantities

Outcomes
- The sponsor will be able to produce 165 panels/day instead of 130 panels/day
- There will be a productivity increase of 27% seen at TMP by implementing this database
- The project estimation database (picture to the right) will show hours required for a project as well as each individual work station
- Database will allow for efficient scheduling during production