

Senior Design I EML 4551C

Team 520: Simulated Assembly Line and Processing Workstation

Customer Needs Statement

FAMU-FSU College of Engineering

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Customer Needs Statement

The customer needs the group to complete a simulated assembly line in a way that separates items made of different materials into the correct sorting lines when necessary. The system must be modular as a way to ease repair as well as create purposeful errors allowing students to diagnose and resolve any errors in the system. It is up to the group to create a process that physically sorts and directs the materials into their proper classification in the most efficient way. The machine will be used as an education tool at Tallahassee Community College for advanced manufacturing students, making modular construction necessary to fulfill the customer's needs. Certain parts have already been purchased by Tallahassee Community College for the machine, limiting the group on the amount of freedom in designing the system. The group is still unaware of the specifics for the purchased parts making key research and concept development limited at this time.

Customer Q&A

1. Is the assembly already built?

-“It is mostly purchased but still in boxes.”

2. What does the assembly move along?

-“Items made of different materials.”

3. What is the purpose of the assembly line?

-“To aid in educating students on manufacturing machine diagnosis.”

4. What will be used to control the assembly line?

-“Allen Bradley PLC”

5. What do you want the assembly line to do?

-“Detect what each item is made of and depending on its material, sort and redirect the item.”