

## Senior Design I EML 4551C

### Team 520: Simulated Assembly Line and Processing Workstation

#### Work Break Down Structure

*FAMU-FSU College of Engineering*

*2525 Pottsdamer St, Tallahassee, FL 32310*



#### Team Members:

David DiMaggio: [dcd14@my.fsu.edu](mailto:dcd14@my.fsu.edu)

Cheyenne Laurel: [cr115d@my.fsu.edu](mailto:cr115d@my.fsu.edu)

Boluwatife Olabiran: [boluwatife1.olabiran@famu.edu](mailto:boluwatife1.olabiran@famu.edu)

Nataajah Taylor: [nataajah1.taylor@famu.edu](mailto:nataajah1.taylor@famu.edu)

Joell Williams: [joell1.williams@famu.edu](mailto:joell1.williams@famu.edu)

#### Faculty Advisor:

Dr. Dorr Campbell

#### Sponsor:

Tallahassee Community College

#### Instructor:

Dr. Shayne McConomy

## Work Break Down Structure

<b>ID</b>	<b>Task</b>	<b>Description</b>	<b>Deliverables</b>	<b>Duration (days)</b>	<b>Resources</b>	<b>Predecessors</b>
<b>1</b>	<b>Planning</b>					
1.1	Define Problem	Discuss the problem that needs to be solved for the entire project		1	Sponsor, Advisor	
1.2	Customer Needs	Meet with sponsor to determine what the customer needs out of the manufacturing machine	Customer Needs Statement	1	Sponsor	
1.3	Preliminary Research on Customer Needs	Research the customer's needs understand the project		10	Internet, Encyclopedia, Companies	1.2
1.4	Initial Research on Existing Products	Use existing products to gain knowledge to create solutions		7	House of Quality	1.3, 1.2
1.5	Classify most important wants and needs	Use techniques to classify the most important need	VDR1, Functional Decomposition	7	Internet, Companies	1.2, 1.1
<b>2</b>	<b>Concept Development</b>					
2.1	Gather existing project information	Improve upon existing solutions or head in a new direction		10	Internet, Companies, Blueprints	1.5
2.2	Idea Generation	Brainstorm as many designs as possible	Concept Generation	10		2.1, 1.5
2.3	Solution solving techniques	Using problem solving graphs and charts to generate feasible solutions	Concept Selection	1	TRIZ	2.2
<b>3</b>	<b>System-Level Design</b>					
3.1	Schematic Drawings	Initial drawings for conceptualization		10	Blueprint drawings, Creo	2.1
3.2	Solution deciding techniques	Decide on best design elements to be used in system	Targets	7	TRIZ	2.3
3.3	Evaluate Configuration Designs	Create CAD simulations to evaluate the system before production		7	Pro Creo	
3.4	Create final CAD version of product	Neat and organized engineer drawings used to manufacture parts	Risk Assessment	14	Pro Creo	3.1, 3.3
3.5	Create Bill of Materials	Detailed list of every part in the system	VDR3, Bill of Materials, Spring Project Plan	1	Pro Creo	3.4