Training & Development for Programming a Single Phase, 6-Axis Robot

Team Description

Team 1 Members:

- Joshua Aylor (EE)

Technical Advisor:

- John Henry (Engineering Supervisor at MEAA)

Abstract

Problem Statement:

- Train engineering group how to maintain, repair, troubleshoot, backup, and program an FR series vertically articulated 6-axis robot.

Solution:

- Hands-on training system that teaches the engineers how to program the robot in a step by step process.
- The program will have the robot transfer a dowel pin from a fitted hole in the –Z axis to another fitted hole in the +X axis

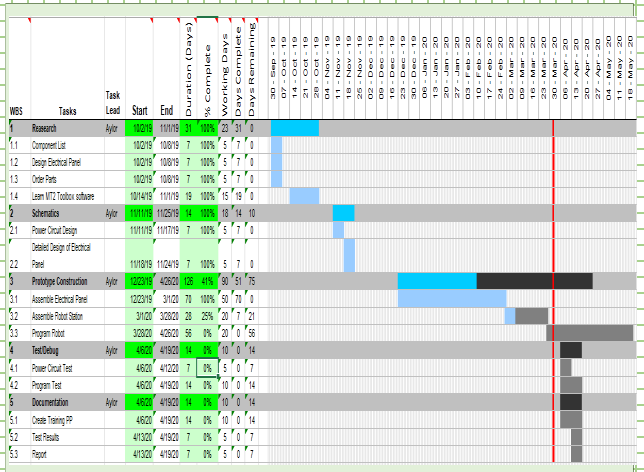
Conclusion:

- The hands-on training system will save MEAA money on in-house training. This will standardize the training and create an improved engineering team.

Electrical Schematic

Unavailable at this time

Gantt Chart



Budget

Components	Price	Quantity	Category
Robot Pen Angled	$296.00	1	Prototype
Robot Plate Angled	$62.00	1	Prototype
Robot Pen	$241.00	1	Prototype
Robot Plate	$62.00	1	Prototype
Total Price	**$661.00**		

Work Accomplished

- Designed, procured, and built all electrical and pneumatic controls and interface for the FR series robot.
- Created the training documents

Final Status

Still need to:

- Program the robot using RT Toolbox3
- Test/Debug Program