

BlueStamp Engineering

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Location: Palo Alto

Instructor: Leah Feuerman

Starter Project: #8, MiniPOV kit

Main Project: #310, 3D printed robotic hand

<http://bluestampengineering.com/student-projects/epic-j/>

Major Steps to complete the project:

1. Make sure all parts have arrived as planned.
2. Check if 3D printed parts are all accounted for, if not, print as necessary.
3. Create power delivery system for the servos, hook up. ***This is a milestone. Save all design files, record a video, and post to the website.***
4. Create the sensor circuit according to the project website (prototype first, then solder).
5. Sew the sensors and the sensor circuit onto the glove. ***This is a milestone. Save all design files, record a video, and post to the website.***
6. Assemble the hand from the 3D printed parts and screws/bolts (this includes the servos).
7. Connect the Arduino to the servos that are mounted on the arm and make sure the system works as expected.
8. Connect the servos to the fingers with strings and test to see if they work. ***This is a milestone. Save all design files, record a video, and post to the website.***
9. Create full documentation, write a blog post describing the system, and post everything on your webpage.

Potential Modifications:

1. Add another degree of freedom (from <http://theroboarm.com/section1.html> and onwards).
2. Create a vision tracking system that can look at someone's arm with a camera and mirror their movements (Leap Motion).
3. Wireless capability
4. Make it into a third arm type deal