

Weekly reports are to be emailed to [atbecker@uh.edu](mailto:atbecker@uh.edu) by 5:00pm on Tuesdays. The purpose of a weekly report is to: (1) give you text and images for your papers, thesis, and dissertation, (2) document progress, (3) identify if you are stuck or need resources.

## Weekly report

### 1. My Goals from last week

- **Deliverable 1:** Build hardware connections for power supply to coils and controllers. - Complete
- **Deliverable 2:** Revise Simulink model to allow for parallel threads of estimator and image detection.

### 2. My Accomplishments this week

- a. Project 1: Magnetic Coil Control for Mico robots
  - **Deliverable 1:** Build a frame and mount coils using 80/20 hardware. - In Progress (need to mount camera and bottom coil).
  - **Deliverable 2:** Run test program (MATLAB script) on the system.
  - **Deliverable 3:** Find and fix problem with Simulink connecting with Arduino.
  - **Deliverable 4:** Construct arena for sphere movement. This may just be a simple platform or a fitted box which is watertight.

### Timeline for Project

1. Finish Construction of frame system.
2. Complete electrical hardware hook up and perform Power-on test.
3. Perform basic program testing using MATLAB script with feedback only.
4. Perform basic testing program using Simulink model.
5. Perform a full tracking problem using both MATLAB and Simulink models.

### • 3. My Goals for Next Week.

- Objective 1: See Timeline listed above. This is the list of objectives from now until the end of the semester.

### 3. What I need Dr. Becker to do:

- a. Assist with debugging script as needed.
- b. Buy a deep cycle marine battery with a large reserved capacity. This is a better choice than an auto starting battery. Not required right now but I will know more after some basic testing.
- c. We need to discuss the academic plan for this project moving forward. If the goal remains to conduct some research and publish a paper, then I will need to enroll in some of kind of class for next semester which allows for this. I will need to clear this with Dr. Long since he has been providing my EM guidance for my final degree plan.