

sdmay19-03: 3D Metal Printer - Phase II

Semester 2 Week 4 Report

February 18th - February 22nd

Client/Advisor: Dr. Bigelow

Team Members

Thomas Waters — *Computer Engineer*

Ariel Rizhsky-Yakobson — *Computer Engineer*

Jacob Gosse — *Electrical Engineer*

Alvin Rymash — *Electrical Engineer*

Armand Hernandez — *Software Engineer*

Summary of Progress this Report

This week, we got brackets for the laser to mount on the printer. However, the holes are not aligned with the holes on the printer. Therefore this week we had to remeasure and realign all the holes on the printer for the laser mounting brackets. There also seems to be measurement problems with the print and powder bed, and we will have to increase the size of the screw holes to account for this. Therefore we also measured the holes for that and for the mechanical engineers to fix it.

Pending Issues

We need to wait on the mechanical engineers to fix the problems with the print and powder beds. We are also waiting for them to create a plate to fix both of them to the printer. We only have one arduino, so we have to make sure that we can record all necessary measurements from the sensors without purchasing another one.

Plans for Upcoming Reporting Period

Our plans for the upcoming period include contacting the mechanical engineers to give them the right measurements. These measurements include the bracket for the laser attachment and also the print bed powder system. We also plan on updating Dr. Bigelow regarding the situation as we cannot make any forward progress without the correct bracket measurements and the powder bed system.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Thomas Waters	Remeasured the correct measurements for the laser attachment	3	14
Ariel	Set up and tested guide laser	3	14

Rizhsky-Yakobson			
Jacob Gosse	Wiring of the vacuum sealed box	3	14
Alvin Rymash	Did wiring for the sensors that will be placed in the vacuum chamber	3	14
Armand Hernandez	Continued work on 3D slicing CAD files	3	14