

MEMORANDUM

TO: Biodesign Instructors

FROM: Team 3 (Robin Cross, Aimee Lam, Patrick Stevenson, Rachelle Walter)

DATE: February 11, 2016

SUBJECT: Milestone 1

As of February 10, 2016, Team 3 has completed milestone 1 of the 3D Bioprinter. All parts required for milestone one have corresponding SolidWorks parts (SLDPRT) and drawings (SLDDRW), which are listed in the BOM. SolidWorks parts (SLDPRT) were found for standard hardware pieces (screws, nuts, etc.). After all the parts were acquired, two assemblies and corresponding drawings were made. All are attached to this document.

The first milestone was split into four segments and contained the following parts:

- A. Short end of the base (with motor): T-slotted frame x 2 (300 x 20mm and 265 x 20mm), lower vertex middle, stage base plate, and t-nuts.
- B. Long end of the base: T-slotted frame (380 x 20mm), lower vertex left/right (and t-nut)
- C. Top of frame: T-slotted frame (385 x 20mm), and upper Z mount.
- D. Y-Axis base: Y motor mount, Y clamp, Y idler mount, Y rod mount, Y idler tensioner, LM8UU bearing holder, belt clamp, motor belt mount, and steel rod.

**The assembly was split into two segments: frame assembly and Y-axes and drive assembly

Creating a SLDprt from an STL file proved challenging, but we worked together (and with instructor help) to recreate these parts and get them finished. It was due to our plan to get done with the assignment early that allowed us to overcome this issue.

The assembly cost us time as well because we discovered a part did not fit correctly for the assembly after it had been started. We fixed the dimensions on this part, but then the first assembly in SolidWorks was no longer viable, and we simply had to start over.

For this packet, there were also issues with converting the SLDDRw file into a PDF format. First, someone had to have SolidWorks at home to be able to view the SLDDRw and convert it into a PDF so that task had to be reassigned. We had to download each part that had been created individually in order to view the drawing in its entirety (otherwise it was suppressed and a blank page). Even after that, two drawings were unusable so the original creator had to supply new ones. It took communication and some extra time to complete this task, but now we have learned for next time how we should organize our folders and make PDF files of the drawings in advanced so that we will not have to waste time at the end putting this document together.

As previously mentioned, the part drawings are attached to this document for your convenience. We look forward to hearing from you about any suggestions you have for us to implement on future assignments.

Sincerely,
Team 3 (Green Crew)