CSIS 2810 Group Project

See updates in red. 11/06/2020

Project title/name

CNC Machine

We've decided to stick with the CNC machine.

What was the inspiration for the project

With the CNC Machine we are hoping to push our boundaries and try for a large scale project with a custom-made CNC Machine. One of our groupmates is hoping to use this machine we build for later use with his crafting hobbies. Text regarding the laser gun has been removed.

Task(s) to be preformed

CNC Machine

TASK	Percent Complete	Notes
Creating a wiring Diagram of CNC Machine.	95%	Complete. Pending edits due to potential additional components (limit switches, other sensors).
Ordering components and then assembling.	75%	Just waiting on powder coated CNC frame to arrive from shop.
Software design.	10%	Figured out how to use basic tools from Stepper motor library. Waiting on frame to arrive for further design.
Programming and testing the software with the CNC Machine.	-	Not started.

Text regarding the laser gun has been removed.

List # and type of Microprocessors to be used

CNC Machine

- 1 Arduino processor

Text regarding the laser gun has been removed.

List additional equipment needed

CNC Machine

Item	Quantity
Arduino processor	1x
1000mm Linear Rails	4x
600mm Linear Rails	2x
Stepper Motor Driver	3x
Stepper Motor Mounts	3x
Pillow Block Bearings	6x
Anti-Backlash lead nut	3x
Acme Scr.; 1/2"-10 RH SS	3x
Thread Clamps	3x
Side-Clamp couplers	3x
9000mm of steel rectangular tubing	n/a
Various nuts/bolts/screws	100~
Limit switches?	2
7V power source	1

Timeline with team member assignments

Design (Dates reflect due date, not start date)

1. Drop-dead date for CNC Project (February 26th) – DONE.
2. Concept Designs for system and design decisions (February 4th) – DONE.
3. Materials arrive (March 4th) – DONE.
4. Build System (wiring, 3d printing etc), (March 11th) – 75%
5. Tweak System (March 18th) – 0%

Software

1. Software design and planning (March 11th) – 10%
2. Coding done (March 25th) – 0%
3. Testing, tweaks (April 1st) – 0%