# 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%