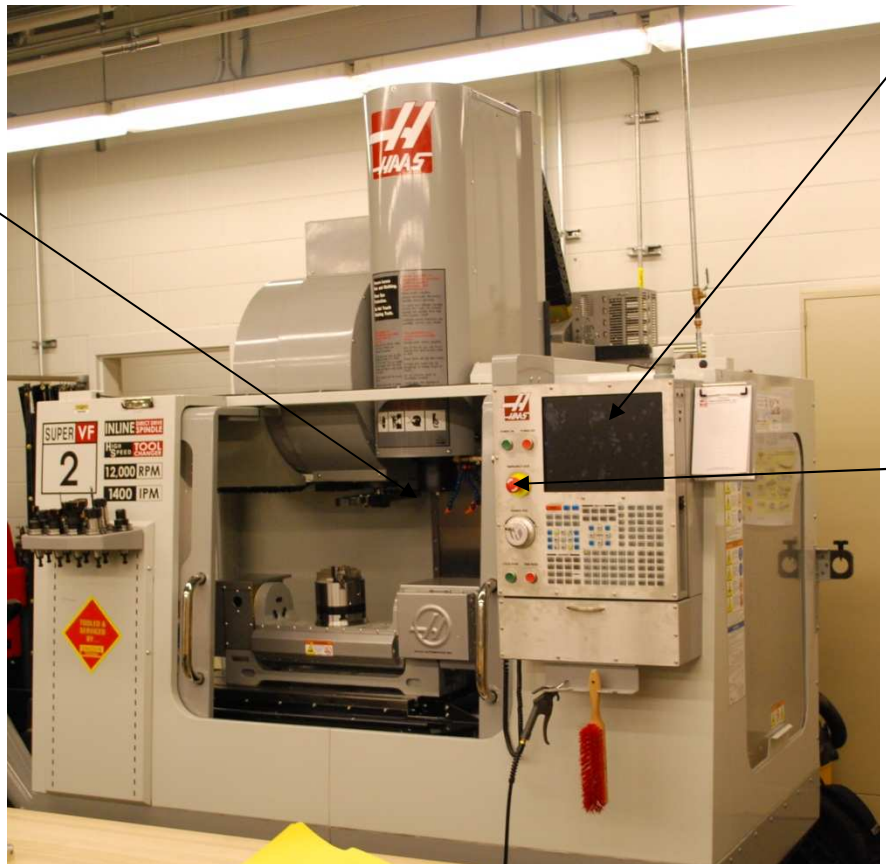
Armstrong Hall of Engineering
Artisan and Fabrication Laboratories (AFL)
Safety and Operational Procedure

HAAS CNC VF2



PPE Required: **Safety Glasses**

Prohibited Clothing: gloves, loose clothing, neckties, jewelry

Machine Access Level: **Supervised Only**

Materials Allowed: **Metals only**

Note: For all other materials see the AFL supervisor!

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Operating Procedure

1. Machine Safety Inspection and Work Area Check-Out

A. **PPE:** Make sure you are wearing the proper PPE and not wearing any equipment listed on the first page that could create a hazard.
B. **Machine Warning Signs:** Make sure you read and follow the machine warning signs that are attached to the machine. If you have any questions, ASK!!
C. **Work Area:** Make sure the area is clean and free and clear of debris and personnel.

2. Work Supervision

A. This machine requires supervision by an AFL employee. A Supervisor or TA will assist you in the set-up and operation of the machine. You may not operate this machine without supervision.

3. Machine Adjustment

A. **Note:** The machine adjustment is usually done with the machine ON.
B. **Select and load tools:** Select and load the correct tools for the application. The TA will help you choose the tools for your specific project.
C. **Secure the part:** There are various ways to hold the part in the machine safely. Consult with the TA about the best option for your project.
D. **Adjust coolant:** Adjust coolant nozzles and coolant if necessary. The TA will assist you with this step. Coolant contains microbes; you must wear a band aid over any cuts or scrapes.
E. **Adjust feeds and speeds:** Adjust the feeds and speeds for the material and tool that you are using. This will be done at the control for a manual or IPS, or VQC performed operation. Otherwise this will be done in the CAM processed program. The TA will assist you with this step.
F. **Identify the machine controls:** Identify the red emergency stop button. This will stop the machine in case of an emergency.

4. Machine Operation

A. **Choose the machining method:** You can either manually run the part, use IPS or VQC at the control to generate a program, or use the Catia CAM software to process and post a generated program to run the part. The TA will assist you with this step.
B. **Set up and operation:** The TA will assist you with setting up and operating the machine.
C. **Safely run the part:** Run the part, The TA will assist you with this step.
D. **Stop the machine:** Push the red stop button, when finished, wait for the machine axis to return to machine home position and for spindle and all movement to stop. Never touch a moving tool.
E. **Remove the part:** Once the machine is stopped, you may open the door to check or remove your finished part. Do not touch the material chips they may be sharp and/or hot.

5. Clean Up

A. **Disassemble work set-up:** Disassemble any fixturing used in the CNC operation. Return all parts to their proper location and the appearance of the CNC machine to how it looked when you started.
B. **Clean up the area:** Clean up all messes, including cleaning out the CNC machine with the coolant hose, sweeping the surrounding area, and returning all tools, etc. The TA will check that the area is clean before you can sign-out of the AFL.