

Manufacturing-Lab Policy Guide for Students

Purpose

This policy guide outlines the responsibilities and procedures for students using the 1st floor manufacturing labs which include:

ET136 – The CNC Lab

ET134 – The Waterjet Lab

ET138 – The L.E.A.F. Lab

ET139 – The Metrology Lab

To make use of the 1st floor project lab, you must have completed the first floor lab training. Additionally, you must complete the online and in person training for any equipment used.

Access and Authorization

- **Lab Access:**
 - Standard hours: Monday to Friday, 8:00 AM – 5:00 PM.
 - Extended access requires supervision by faculty or authorized staff.
 - Do not use the lab during closures or outside approved hours.
 - **Authorization Requirements:**
 - Complete required safety training and pass relevant assessments.
 - Gain explicit authorization for machine use from lab staff or faculty.
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General Safety and Lab Conduct

- **Attire and Personal Protective Equipment (PPE):**
 - Wear long pants, closed-toe /heel shoes, and appropriate safety glasses.
 - Secure long hair and avoid wearing loose clothing or neckwear.
 - Additional PPE, such as dust masks or gloves, must be used as needed.
 - Safety glasses are recommended but not required in the Metrology Lab (ET 139)

- **Machine & Equipment Use:**

- Use only the machines for which you have been trained and authorized, and have the appropriate badge for. CNC machines require permission, supervision and training to operate.
- Operators should use caution when using jog mode near work pieces.
- If the equipment's power supply requires a lock to be removed before operating, replace that lock after you are done using the equipment.



Figure 1 A lock ensures only trained operators may use the equipment.

ET: 136: CNC Machine Cleanup Responsibilities

General Expectations

Every student is responsible for cleaning their CNC machine and surrounding area after use. Failure to comply may result in loss of privileges, grade penalties, or additional cleanup assignments. Each machine has color-coded tools and a kit containing various end mills and cutters. Please do not borrow tools or cutters from other machine's chests. If your station is missing equipment, let staff or faculty know so it can be replaced.



Figure 2 CNC Machines have color-coded tools that should be kept with each machine.



Figure 3 Operators should keep tools inside their assigned workstations.

Cleanup Checklist

1. Machine Interior and Tools:

- Spray down the machine interior and use the auger to remove any chips.
- Break down any tools you have used and return them to the toolkit.
- The dowel pin, face mill, and probe may remain in the machine.
- Please remember your thumb drive.

2. Work Area:

- Sweep, then mop in front of, besides, and behind your machine.
- Do not mop coolant. Use an absorbent instead.
- There should be no missing tools at your station when you leave.

- Each station should be left in a ready to use state for the next machinist.

3. Broken or Missing Equipment / Tools:

- Please report any broken or missing tools so we can replace them.
- Report any maintenance issues or malfunctions to lab staff immediately.

4. Material Storage and Disposal:

- Label and store leftover materials appropriately.
 - Follow proper disposal procedures for hazardous or special waste.
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Maintenance of Clean and Safe Lab Environment

- **Shared Responsibility:**

- Collaborate with peers to maintain cleanliness and orderliness in common areas.
- Report unsafe conditions to lab staff or faculty without delay.
- Leave equipment in a clean and orderly manner, free of chips, scrap materials, cords,

- **Prohibited Actions:**

- Do not leave machines running unattended.
 - Machinists should be able to immediately stop their machines if necessary (keep your hand on feed hold and be ready to hit the e-stop)
 - Never reach into a machine when it is operating or may begin to operate.
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Consequences for Non-Compliance

Failure to adhere to cleanup policies or general lab guidelines may result in:

- Temporary or permanent loss of lab privileges.
 - Grade penalties for related assignments.
 - Mandatory additional cleanup duties.
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Support and Assistance

If you have questions about cleanup procedures, equipment operation, or safety protocols, contact lab staff or faculty. Assistance is available during standard access hours.

By adhering to these policies, students contribute to a safe, efficient, and collaborative learning environment for all CNC machine lab users.