FAB LAB REGULATIONS, SAFETY RULES AND TIPS

GENERAL
-The FAB LAB is open during posted hours only, regularly check the UTK FAB LAB webpage.
- Attendance and successful completion of a general FAB LAB orientation must occur before use.
- Sign in and out at register.
- Never work in the FAB LAB alone.
- Never work in the FAB LAB when tired or impaired (sick, alcohol, drugs)
- Report all incidents, no matter how small to the lab supervisor.
- FAB LAB use privileges may be revoked if these rules are not followed.
- In the absence of the Supervisor, you must comply with the FAB LAB monitors‘ decision.

CLOTHING
- No loose clothing, gloves, or jewelry that could get caught in moving machine parts.
- No sandals or open-toe shoes while in the FAB LAB.
- Always wear protective eyewear.
- Wear dust mask if needed.
- Long hair must be contained and out of the way.
- Headphones/ear buds or any other personal speaker device are prohibited in the FAB LAB.

MACHINE / TOOL USE
- Follow all safety guidelines for each piece of equipment.
- Do not mill wood without Supervisor’s permission.
- If there is any doubt about how to perform a task or operation, ask shop personnel for assistance.
- Never make any changes or alter machines’ basic setup. If you don’t know how to adjust something, ask.
- Never remove a guard or safety device from a machine.
- Ask shop personnel to change blades, belts etc. when needed.
- Do not attempt repairs on equipment, report any damage or issue to shop staff.
- Do not overreach. Keep proper footing and balance at all times.
- Do not use excessive force on any tool.
- Use push sticks on narrow pieces.
- Secure work piece. Use clamps or double sided tape to hold work.
- Always use a machine’s dust collection.
- On all table saws and miter saws keep work piece firmly up against fence and flat on the table.
- On band saws, always adjust guard within ¼ inch from work piece.
- Keep work area clean. Cluttered areas invite accidents.
- All work areas must be cleaned before you leave. Clean up at least 15 minutes before closing time.
- Return all shop tools to their proper storage cabinets before you leave.
- If a tool is lost or stolen or otherwise missing while in your possession you are responsible for replacing it with an equal quality tool.
- Tools are never to be taken off premises.
lab

Hours

The FAB LAB is split into three zones, each with its own access requirements and hours. Typical Semester hours will be posted on the UTK CoAD website and at shop entry points. There will be no access to anyone outside of posted hours without prior approval by the Director and the FAB LAB Supervisor. Approval must be received one week prior to facility use. Hours and access is determined on availability of staff.

- **Downtown Studio Space**-
  - 24 hour access to students involved in a studio class using this space.
  - Students & Faculty who are not involved with a studio using this space will only have access during FAB LAB woodshop hours.
  - Access via Gay Street using a valid and activated VOL card.

- **FAB LAB Woodshop and Rapid Prototyping Area (Upper Level)**-
  - Student & Faculty can access this area during posted hours and when a trained shop monitor is present.
  - In the event of change in shop hours, changes will be posted online and at shop entry points.
  - Access via GAY street entry or upper level side parking lot door using VOL card. After hours use will not be allowed, a segregation door will be closed between the studio and woodshop when no trained monitor is present.

- **FAB LAB Metalshop (Lower Level)**-
  - Operating hours are between 8.30am-12pm & 1pm-5.30pm, Monday- Friday.
  - This area will only be accessible via appointment and when a shop supervisor is present. Appointments will be made through the UTK FAB LAB website.
  - There will be no access to anyone outside of these hours.
  - This area is supervised ONLY by shop supervisors.
  - Doors to this area will remain locked at all times.
  - Access is via internal door only, unless loading materials.
Policy and Procedures

Shop Orientation and Safety obligations

- Attendance and successful completion of a general FAB LAB orientation must occur before use.

- Certain high-risk machines require students and faculty to show competence before unassisted access will be granted.

- Equipment within the FAB LAB has been categorized into levels. The level designation will determine how and when Students & Faculty can access the equipment.

Level 1
FAB LAB introduction- Before access will be granted all users must attend a FAB LAB facility orientation. Level 1 is a prerequisite for all other levels.

Level 2
General Woodshop equipment i.e. table saw, drill press, bandsaw, sanders, etc.

Level 3
Machine specific orientation- Jointer, planner, router table, laser cutting & 3d printing.

Level 4
Machine specific orientation, operation only during specific hours and while designated shop personnel are present. CNC routing, water jet, manual mill & lathe, welding & metal cutting, plastic molding & forming.

Level 5
FAB LAB Supervisors or equipment specialists only. HAAS VF-2 (CNC metal mill), ABB (robotics), HAAS ST-25 (CNC lathe).
Incidents

Injury causing Incident

In the event of an injury causing incident, the following procedure must be followed.

- Notify the FAB LAB staff immediately. Shop staff will follow required procedures
- All incidents must be reported to the shop supervisor, the shop supervisor will meet with the injured person before shop privileges will be reinstated. During this meeting the shop manager will establish the cause of the incident and to assist with prevention for future accidents.

Non-Injury Causing Incident's

In the event of an incident in which a machine, material or the facility is damaged or an unsafe event the following procedure must be followed.

- All incidents must be reported to the shop supervisor, the shop supervisor will meet with the person/s involved before shop privileges will be reinstated. During this meeting the shop supervisor will establish the cause of the incident and assist with prevention for future accidents.

Shop Occupancy

The FAB LAB is split into two distinct zones, each having its own occupancy requirements. In order to maintain a safe shop environment, user limits will be enforced. It is the users’ responsibility to ensure these numbers are not exceeded. Students working in the FAB LAB sections will be required to sign in before every use and sign out before departure.

- FAB LAB (Upper Level) - A total of 20 students using equipment at any time.
- FAB LAB (Lower Level) - No more than 20 students.

Cleaning the FAB LAB (all areas)

- Each user is personally responsible for cleanup and tool return.
- After ‘EVERY’ use, each machine and work area should be cleaned.
- When groups are using equipment, the last person is responsible for cleaning the machine and surrounding work area.
- Students will be required to assist with general shop cleanliness at the end of each day or when deemed necessary.
- Students’ failure to follow clean up procedures could result in loss of access to the facility.
FAB LAB User Requirements

- The primary responsibility of the workshop staff is to ensure the correct and safe operation of the tools, machines and equipment located within the shop space.
- If requested the shop staff may also be able to provide information about construction techniques, joinery, recommend materials and suppliers.
- With inexperienced users or in the case of specialty or high risk operations, shop staff are available to provide assistance. However during high activity periods, the staffs’ available time to directly assist may be extremely limited.
- The woodshop is fitted with a dust collection system, this system is to minimize airborne particles and improve shop air quality. If you are using a fixed machine or power tool that requires dust collection, ensure the dust collection system is turned on and the blast gate is open for that particular machine. After turning the machine off, close the blast gate and turn the dust collection off. Some equipment has a dedicated dust collection unit, when using these items, turn the dedicated collection unit on before use and shut off after you are complete.
- Any damage to equipment, blade, bit or tool breakage must be reported immediately to the shop staff.
- Tools located in the tool cabinet may only be used within the shop. Ensure when you are finished with a tool that it is returned to its proper location (not just where you found it). Tools cannot be removed from the FAB LAB, unless they are required for special university projects.
- Clean up your work area before leaving the shop. Due to limited shop space, user may not be able to leave a project set-up. It is your responsibility to clean up ALL machines that you used, place waste in the appropriate waste container.
- Storage of materials & projects in the Workshop is allowed only on a short term basis (with prior approval from a shop supervisor). Materials and projects left for several days without prior notice will be removed without any notice given. Class projects requiring longer term storage, will only be allowed with supervisors’ approval.
- There will be no storage of materials after the end of the semester, all materials will be considered abandoned and disposed of accordingly.
- Personal projects will only be allowed at the discretion of the shop managers and during low shop demand times. There will be no allocation for storage or no shop materials will be used for personal projects without approval from shop supervisors. All digital machines will be unavailable for personal projects.
- Reclaimed or used materials can only be used when approved by the shop managers. In the case of digital metal machining, no used materials will be allowed, access will require proof of purchase showing type and grade of material.
- Shop users are required to supply their own consumable supplies. Some items such as brad Nails, staples and PVA wood glue will be available.
- The shop will be cleaned at the end of each semester and all unclaimed items will be removed or become workshop property.
Materials and Supplies

It is your responsibility to supply materials for the completion of projects. There will be limited materials available in the scrap material bins for use, but outside of these, you need to ask permission to use other materials. Remember if you didn’t buy it or bring it in, then it is probably not for use.

Personal Projects

The FAB LAB is a makerspace that promotes design exploration and the production of prototypes. Anything outside of prototyping requires the approval of BOTH the CoAD Director and FAB LAB Supervisor. Depending on the nature of the work and the equipment utilized, additional fees and or labor may be charged to cover expenses. Such work will be billed to individuals at prices posted on the FAB LAB website and must occur under the following conditions:

- All standing policies and procedures are followed.
- Only COAD faculty, staff or currently enrolled students may use the FAB LAB and its equipment AFTER successful completion of required orientations.
- Equipment use cannot interfere with the daily operation of the FAB LAB, duties of FAB LAB staff or other users performing course-related work in any way.
- The user provides all consumable materials (fasteners, glue, sandpaper, hardware, CNC bits, etc.).
- The FAB LAB Supervisor has the authority and responsibility to determine whether any such work is permitted on a case-by-case basis.

Personal Property

The FAB LAB does not take any responsibility to damage of theft of any materials, projects or personal items bought into the FAB LAB. It is each FAB LAB users’ responsibility to maintain the security of their own items. Any user found responsible for intentional damage or theft to FAB LAB property or student property will lose access to the FAB LAB and will be reported to the college administration for further disciplinary action.
Deliveries

- All deliveries made to the FAB LAB must be approved by the FAB LAB Supervisor.
- No delivery will be accepted without prior approval.
- **You must schedule deliveries between the hours of 8:30am - 5:30pm.**
- Approval must be obtained 1 business day before scheduled arrival. Staff will not be responsible for accepting materials, the ordering party or a representative **must** be present at time of delivery.
- In the case of heavy and/or oversized items a forklift is available on-site. This forklift can only be operated by shop supervisors, access to the forklift is only available Monday-Friday 8:30am-5:30pm and with prior notification (24 hours).
- The FAB LAB is not responsible for any damage and/or loss of materials during delivery.

Parking

The FAB LAB / Downtown Studio has an adjacent parking lot we share with a neighboring business. Ten spaces are ours.
- Parking spaces are not guaranteed and students should carpool when coming to the FAB LAB.
- Parking is only allowed within designated parking spaces.
- Additional free parking is located under I-40, but should only be used when walking to and from the FAB LAB in groups.
- Metered parking is available along Gay Street and is free after 6pm and on weekends.

Personal Safety

The FAB LAB / Downtown Studio are located in downtown Knoxville, away from main campus, and as such, students should take extra precautions.

- Never walk to or from your vehicle alone.
- Never leave any purse, bag, electronics, etc. in clear view within your car. Any items you intend to lock in the trunk should be placed there before arriving downtown.
- **For emergencies, call 9-1-1.**
- Any non-emergency report should be reported to UT Police at (865) 215-7268.