

Mechanical Engineering Composite Shop Rules

General

1. Sign in & out of the composite shop every time you enter or leave.
2. The shop is only open during posted times.
3. No food or drink is allowed in the shop.
4. Wear safety glasses at all times while in the shop.

Autoclave, Ovens, Hot Press

1. Check in with the shopmaster **each time** before using the fabric cutter, autoclave, or hot press. Schedule online 24 hours in advance to ensure access.
2. Always check that the autoclave is not pressurized before opening the door.
3. Help us keep the autoclave free of moisture (it damages the heaters). Thaw frozen parts before putting them in the autoclave, and keep the door closed when not in use.
4. Don't put hot parts or molds directly on cutting mats or other surfaces damaged by heat.
5. Keep flammable liquids such as acetone bottles away from ovens & other sources of heat.
6. Use good judgement when leaving hot machines unattended- consider whether a fire could start if a program stalls or there is a controller error.
7. Wear long sleeves and insulating gloves when moving objects in and out of hot machines.

Fabric Cutter

1. Pause or stop the fabric cutter before adjusting your work piece.
2. Don't place tools on the fabric cutter table.
3. Do not leave the fabric cutter unattended during operation.
4. Pull long hair back and do not wear loose clothing or jewelry while using the fabric cutter.
5. There must be someone else present in the lab while using the fabric cutter.
6. Handle heavy materials with care- prepreg rolls may require 2 people to move.

Chemicals

1. Wear disposable gloves when handling chemicals, including uncured prepreg fabric.
2. Wear long sleeves, long pants, and closed toed shoes when working with liquid chemicals, such as while doing wet layups.
3. Use odor and fume producing chemicals only in the spray hood. The hood is designed for "shop" use, not highly hazardous chemicals or chemicals with strong odors.
4. Use mold releases that are labeled as low-odor or low-VOC. If you must use a mold release or resin that constitutes an odor nuisance for quality or research reasons, make prior arrangements with the shopmaster for scheduling & ventilation. "We need to use it because this is what was donated/bought" is not sufficient reason for using high-odor chemicals.
5. If you bring a new chemical into the lab, send a copy of the SDS to the shopmaster at mhickner@uw.edu.

Tools

1. Use tools only for their intended purpose. Screwdrivers are not chisels or pry bars. Wrenches are not hammers.
2. Protect vacuum pumps from resin- use resin traps for wet layups.
3. Put away tools & materials even if they were out when you found them.
4. Teal tools belong in the composite shop- orange & pink tools should be returned to the machine shop. Do not remove tools from their respective shops.

Freezer

1. Wear insulating gloves when handling materials or working in the freezer. If you'll be in the freezer for any significant amount of time, also wear a coat and hat.
2. Latch the freezer door when you leave, but be careful not to latch the door if someone is inside. If someone does latch the door with you inside, you are not locked in; turn the glow-in-the-dark knob to unscrew the latch from the door.
3. Store materials so that they cannot fall or roll onto someone. Secure heavy rolls with chains or rope. Keep materials out of the center aisle.

Lab Housekeeping

1. Be respectful of other users; leave your work area cleaner than you found it. Ask someone if you don't know where something is stored.
2. No machining, trimming, cutting, sanding, or drilling, in the composite shop- there is a downdraft table in the machine shop. Avoid introducing dust & grit to the composite shop whenever reasonably possible.
3. Before you leave the shop, sweep or vacuum your work area, including the table & floor, and empty any nearly-full large trash cans. (The janitors do not clean any part of the composite shop.)
4. Put something down (cardboard, paper, aluminum foil) on your work area before using anything sticky. This includes on the scale and inside the spray hood. Wipe up small spills immediately.
5. Get permission & an assigned space from the shopmaster before storing parts, molds, or materials in the shop, including in the freezer. Space is limited; only short-term storage is available for parts & molds.
6. If you need to leave a part out overnight, (e.g. for debulking), let the shopmaster know in advance, and post a name, e-mail address, phone number, and time the part will be moved.
7. Use materials from the correct rack or cabinet- most materials are not shared. If you're not sure what's available, just ask.
8. Avoid creating trip hazards by using overhead electrical drops and promptly putting away extension cords.

Emergencies

1. Report unsafe conditions to the shopmaster.
2. Report accidents or spills immediately to Michelle (Engineering Annex 114-2), Bill (MEB 132A), or Eamon (Machine Shop in Engineering Annex), or the shopmaster in charge. For emergencies, call 911.
3. In case of fire, first call 911. Then, if the fire is small you may put it out with a fire extinguisher. If the fire is too large to put out easily, leave immediately, close the door behind you, and pull the fire pull as you leave.