BME Lab Procedures and Safety Expectations

BME554L (Fall 2025)

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> **Important**
>
> Safety is Always First, Cleanliness a close second

Safety always comes first in lab. To that end, you are expected to follow the rules in this document. Failure to do so may result in revocation of laboratory privileges, reduction of your course grade, and possible withdrawal from your course. Understanding risks and learning to work safely in the laboratory are an important part of your education.

Before entering lab, your safety training must be current. You need Duke's Occupational and Environmental Safety Office's:

- Fire/Life Safety, and
- Laboratory Safety-General

training modules. We know that you may have done this training before, but it expires in one year, and you must be current through the end of the semester.

Most accidents are the result of a series of failures. That said, most accidents are preventable. You are responsible for your safety and the safety of those around you. The vast majority of accidents involve some combination of inattention, carelessness, horseplay, impairment, broken tools, and lack of knowledge. All of these factors can be mitigated and it's your job to do so.

You are responsible for keeping the lab clean.

> **Warning**
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> Failure to keep a clean workspace can result in a lower grade for you and your team.

Important

If you or someone else in lab needs immediate medical attention, call 911.

In case you need to report your location, you are in CIEMAS B209. Non-emergent problems, call 681-WELL (681-9355). If you are injured in lab, you must let an instructor/TA/lab staff member know as soon as possible. Lab staff after-hours phone number is on the contact cards posted outside every lab door.

Note

Keep these points in mind… - In an emergency, call 911. Location: CIEMAS B209

- In the event of a non-emergent injury, seek medical attention and let an instructor/TA/lab staff know within 12 hours.
- Find the emergency exits.
- Never work alone. Two or more people must be present and able to see and hear each other.
- Inspect every tool before use. Remove broken tools from service, place them on the broken tools shelf at the back of the room, and notify lab staff.
- Wear safety glasses when appropriate. This includes, but is not limited to, activities such as soldering, sanding, filing, hammering, cutting, and drilling.
- Wear hearing protection when using noisy tools such as drills and the Dremel tool. Ear buds or music headphones are not sufficient hearing protection.
- Never work impaired. If you are tired, stressed, in a rush, or impaired in any other way then do not work in lab. Go home and recuperate.
- Tie back long hair to keep it away from tools.
- Closed-toe shoes must be worn in the lab. Long trousers are preferred.
- Properly secure materials. Clamps, vises and portable worktables are available.
- Don't force anything. If the job requires significant force, you're doing it wrong.
- Keep food and drink out of the lab!
- Power down equipment when finished with it.
- A fire extinguisher is outside the door.

- Wash your hands before leaving lab.
- Bits of unused solder, wire and lead trimmings all go in a “Solder Scrap” container.
- Anything contaminated with solder paste (wipes, boards, applicators) goes in a “Solder Scrap” container.
- Other hazardous waste dealt with on a case by case basis; ask lab staff for help.
- Put tools away, in the right place. Tool drawers are labeled, but if you’re unsure where to put a tool, ask your TA/lab staff.
- Do not hoard parts or tools.
- This bears repeating: Take the parts you need, but only the parts you need. Do not hoard parts. If you see a part becoming scarce, let lab staff know so they can re-order.
- Benches are for temporary use only. Leave no trace that you were at the bench when you leave for the day. Rarely, with approval, a bench can be claimed for the semester.
- Any and all paint must be pre-approved by an instructor/TA/lab staff. Unapproved paint on projects will result in a lower grade. (Spray paint indoors is never approved.)
- A representative from your group is expected to participate in weekly cleaning. Your instructor will give you the schedule.
- Place a cover on the bench for messy work. Chucks and Ram Board are available for this.
- Lab staff have a collection of good soldering tips and fine tools (e.g. tweezers). If you have need for something better than you can find in lab, ask lab staff.