

**SIUE Department of Civil Engineering  
General Laboratory Safety Rules  
(revised December 2018)**

**All Civil Engineering laboratory users are required to know and abide by these rules.**

**In case of emergency immediately call 911 *if necessary* AND notify Emergency Management and Safety (x3584), and Mr. Brent Vaughn (x3533)**

***CE FACILITIES AFFECTED BY THESE RULES.***

*All of the following rooms and areas are in the Engineering Building*

Room numbers 0029, 0030, 0031, 0032, 0033, 0041, 0044, 0050, 0051

You should also read the Job Safety Analysis written specifically for most laboratory rooms.

**You must be provided instruction** by CE faculty or staff prior to operating any equipment in the labs.

*If you do not understand the hazards that may be encountered in any lab then please do NOT attempt to use the equipment. Seek assistance for anything that you do not understand.*

***WHAT SHOULD I DO IN AN EMERGENCY?***

**IN ALL CASES**, have one person immediately call **911 *if necessary*** AND notify Emergency Management and Safety (**x3584**), and Mr. Brent Vaughn (**x3533**). If blood is spilled, also contact Building Services (**x3191**) or Facilities Management (**x2999**). Telephones are located in the corridor behind the walls in the area of the water fountain across from classroom EB0012, on the wall just outside room 0051, and on the wall between room 0033 and the loading dock.

**For a minor cut**, thoroughly rinse the cut. **For serious injuries**, get help.

**If someone is being shocked, DO NOT TOUCH THEM.** If possible, turn the power off. Use an insulating object, such as a wooden (not metal) chair, an article of clothing or cloth, to pull the person free.

**If a spill occurs**, restrict access to the spill area.

**If chemicals come in contact with skin**, immediately wash the area with a generous amount of water.

**If a fire occurs and is small enough to fight**, use the fire extinguisher in the lab.

- *Pull the pin.*
- *Aim at the bottom of the flames. Remember to be level with the flames.*
- *Squeeze the handle.*
- *Sweep back and forth.*

**Back away** from an extinguished fire. **Close the door** when leaving.

## ***WHEN DO I HAVE ACCESS TO CE LABORATORIES?***

You may only enter the laboratory when specifically authorized to do so by the Department of Civil Engineering (CE). For CE-sponsored activities, a Civil Engineering professor, Civil Engineering staff member or assigned Civil Engineering laboratory teaching assistant must be present at all times unless relevant training and authorization have been provided by the CE department to the student.

For activities sponsored by other departments, faculty and staff from the respective departments that are authorized to use specific CE lab facilities must directly supervise all students working for their department. **These faculty and staff directing the lab activities must insure that all lab safety rules are understood and are responsible for the activities in the lab conducted by their students.**

The process for gaining authorization to use CE lab facilities begins by contacting the CE department chair or laboratory specialist. Consideration for granting authorization will be evaluated primarily on the nature of the proposed activity, whether it is an appropriate use for the lab and equipment, and whether the requestor has the experience and knowledge to safely direct the proposed activity.

## ***HOW SHOULD I CONDUCT MYSELF?***

- **Place** all belongings out of the work area.
- **Do not** obstruct doorways.
- **Do not** play in the lab.
- **Never** eat, drink, or smoke in a lab. (Exception: Food may be consumed in portions of a lab area specifically approved as an office area provided proper hand washing is properly done, the area is kept clean, and all food contaminated trash is discarded in trash receptacles outside the lab area.)
- **Never** taste or smell chemicals.
- **Always wash your hands** with soap before leaving the lab.
- **Know** the location of and how to use safety equipment such as fire extinguishers, eyewash stations, first aid kits.
- **Know** the hazards of the chemicals you are using. Find the Safety Data Sheets located in the yellow safety notebook provided in the lab or go online <https://rms.unlv.edu/msds/>. This link goes to the Chimera Chemical Database service that SIUE has contracted with to maintain an online database of hazardous substances.
- **Dry** wet hands and clothing before working with electricity. Mop up all water spilled on the floor.
- **Keep** the lab clean. Carefully pickup, sweep or mop up messes.

### ***Exceptions:***

- In the case of hazardous chemicals or blood, please see the instructions for “***WHAT SHOULD I DO IN AN EMERGENCY?***” below.
- In rooms 0029 Concrete Lab 0030 Asphalt/Aggregate Lab, DO NOT sweep since this will raise dust. Use a wet mop or the specifically designated vacuum cleaner.
- **Report** faulty equipment to the teaching assistant and/or the professor immediately. Do **not** use it until it has been inspected by CE staff or faculty and declared safe to use.
- **Treat** all equipment with care. Be sure to clean any equipment up after using it.
- **Be** as careful for the safety of others as you would for yourself. ***Think before you act.***

**When in the presence of powered test machinery or when working with hazardous, heavy or hot materials:**

- **Do not** work alone in the lab.
- **Do not** wear bulky, loose or trailing clothes.

- **Do** use personal protective equipment appropriate for the operations you are involved in or near. — gloves, safety glasses, aprons, and face shields. (*NOTE- Students are expected to provide their own safety classes with side shields*)
- **Do not** wear contacts when working with volatile materials.
- **Do** wear shoes that completely cover your feet and pants that completely cover your legs.
- **Do** tie back long hair. Remove metal bracelets or watch straps when working with electricity.
- **Do** stop, de-energize or disengage the power source and, if necessary, mechanically block or lock out the moveable parts machinery or equipment capable of movement before cleaning or adjusting.
- **Do** be sure that protective guards for all accessible moving mechanical components must be in place and functioning properly, before equipment is turn on, electrical power is applied or pressurized air is connected, etc.
- **Do** beware of the effect of fluorescent lights which may cause rotating equipment to appear to be stationary.
- **Do** be sure everyone near the equipment knows the equipment will be started and no one is in danger of being injured by the equipment.
- **Do** use extreme caution when working with electricity under wet conditions. Avoid if at all possible.
- **Do** make sure all electrical circuits, components and equipment are properly grounded BEFORE using them.
- **Do not** overload circuits. Don't defeat or bypass the overload protection of a circuit. If a circuit breaker or fuse trips or blows, don't just reset or replace, find the reason and correct the problem.
- **Do not** lift objects that are heavier than you can safely handle. Always use appropriate mechanical means for lifting, carrying, positioning or adjusting heavy equipment or supplies.
- **Do** abide by additional precautions when instructed by department staff or instructors to do so.

#### **WHAT ELSE SHOULD I CONSIDER?**

- **Pay attention** to the chemicals you are using. Read the labels and Safety Data Sheets provided in the lab or online at <https://rms.unlv.edu/msds/>.
- **Use the fume hood** if working with volatile chemicals and strong acids and bases.
- **Do not** contaminate reagents. Do not place items in the reagent bottles—pour out an appropriate amount. Do not place a stopper on the bench. Do not return unused chemicals to the reagent bottle.
- **Do** label any container that will be used to store any chemical beyond the lab period. As a minimum, the label must contain the following information:
  - The name of the chemical.
  - The approximate amount of the chemical.
  - The date the chemical was added to the container.
- Always pour acid into water (AW).
- Never use an open flame when flammable chemicals are present.
- To insert a glass tube or thermometer into a rubber stopper, wet the tube with water, wrap the tube in a cloth, and push it gently into the stopper with a turning motion.
- Place all broken glass in the container marked for broken glass. Place nonhazardous solid waste in waste baskets. Place all hazardous waste in a properly labeled container in the hazardous waste cabinet in EB0051 and contact Mr. Brent Vaughn (x3533).

## **SIUE Department of Civil Engineering Laboratory Safety Rules – Student Agreement**

These rules were prepared by the SIUE Department of Civil Engineering. It is the responsibility of each student participating in activities in the Civil Engineering labs to read, understand and follow these rules.

As a future civil engineer you should keep in mind that when you enter the work force you will be expected to understand basic safety rules and follow appropriate procedures as directed by an employer, client, job site supervisor or regulator. Just as you should build your library of reference materials, you should also acquire and know how and when to use personal protective equipment.

Safety glasses are generally required where there is risk to your eyes due to some procedures or activities. When you turn in this signed agreement to the CE department, you will be given a pair of safety glasses to keep. You must be prepared to bring these safety glasses whenever entering the laboratory unless your instructor tells you otherwise.

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**I have read, understood and agree to follow the Department of Civil Engineering Laboratory Safety Rules. I will provide safety glasses for myself for all laboratory activities as required. I will also keep a personal copy of these safety rules for my own reference.**

Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

(original to student file; copy returned to student)