

LABORATORY SAFETY RULES:

CLOTHING, PERSONAL PROTECTIVE DEVICES

1. MIOSHA approved eye protection must be worn at all times when you are in the laboratory. Wearing contact lenses while doing lab work may not be advisable because some lenses are permeable to gases, and certain gases can be trapped next to the eye by contact lenses. Check with a physician to determine if your lenses are suitable for laboratory work.
2. Attire: confine long hair and sleeves when working. Wear closed shoes, not sandals, in the lab. Leather shoes are recommended. Wear clothing that offers the most protection - a lab coat or apron is required when working in the laboratory. In spite of precautions, accidents do happen. Do not wear your favorite clothing to lab.
3. Wear appropriate gloves and face protection when working with hazardous liquids, solids, or solutions.

ACCIDENTS

4. During the first day of lab: locate all emergency and safety equipment that you may need to use at some time. This includes: shower, eye wash, fire extinguisher, fire blanket. Locate the nearest emergency exit and emergency telephone.
5. Extreme Emergency: Dial 911 for fire, ambulance, medical assistance or police.
6. Campus Security: Dial 911 from a phone; from the Intercom dial 123-911; this connects you with Negaunee dispatch where you may request MTU Public Safety.
7. Report all accidents and/or injuries to your instructor, even seemingly minor ones. Medical consultation/treatment may be required (Student Health Center - MTU Campus during Student Health Center's regular hours, 8:30am-5:30pm). Your instructor will arrange for you to be brought to the health center for treatment. Give her/him your student I.D. number so that the Health Service can be called prior to your arrival.
8. Clean up all chemical spills immediately. Consult your instructor for the proper chemical waste disposal procedure.
9. Broken glass is to be put in receptacles marked "Broken Glass Only". If you break glass make sure all of the pieces are swept up.
10. For chemical contact with skin or eyes, wash affected area with water for 15 minutes.

ACCIDENT PREVENTION, SAFE PRACTICES

11. Use good judgement and care while working in the laboratory.
12. Never work alone in the laboratory. Another adult must be in verbal contact with you whenever you are doing laboratory work. Children are not permitted in the laboratory.

13. Never carry out unauthorized, unplanned, nonscheduled experiments. Discuss any unusual work with your instructor prior to doing it.
14. Do not handle any lab equipment from on-going experiments unless specifically authorized by the laboratory instructor.
15. Never eat, drink, or taste anything (food or chemicals) in the laboratory. Do not place fingers, pencils, pipettes, etc., in your mouth. Wash hands and arms when you finish working in the laboratory.
16. Always use a suction bulb, never your mouth, when filling a pipette with a chemical reagent or sample.
17. Always avoid unnecessary hazards. Keep working surfaces clean at all times. Do not sit or lean on bench surfaces. Keep the floor clear of tripping hazards. Jackets and bookbags should be left in rm. 111 DESEB. Only carry your notebook into the laboratory. In the lab, keep drawers closed except when removing equipment.
18. Do not force glass tubing and/or thermometers into rubber stoppers - always lubricate the hole in the stopper and protect your hand with a towel when inserting the glass.
19. Never use an open flame (Bunsen burner) in the vicinity of flammable solvents.
20. Do not throw chemical waste in the sink or in the waste baskets. Always consult your instructor for the proper chemical waste disposal procedure.
21. Do not test odors by direct inhalation from the container.
22. Handle all electronic equipment with care. Do not allow equipment to get wet.
23. Read all labels on reagent bottles to make sure you have the right reagents. Report empty reagent bottles to your instructor.
24. Always add concentrated acid to water and acids to bases. Pour slowly while stirring the mixture constantly.
25. Do not insert pipettes directly into reagent bottles. Transfer an approximate amount into a beaker or other container.
26. Material Safety Data Sheets (MSDS) are located in a bin to the right of the entry to Room 110 of DESEB. This information is made available to you as part of the Michigan "Right to Know" law. These sheets provide information on hazards of materials used in the lab.
27. Hazard Communication Standard: I am aware that I have a "right to know" all safety information contained in the Manufacturers Material Safety Data Sheet (MSDS) for any chemical used by me or to which I am exposed. I can obtain this information by requesting a copy of the MSDS from room 110 DESEB. After reading the paragraph below, complete the section below and return it to your lab instructor.

Laboratory Safety Agreement

I understand that I am responsible for conducting myself in a safe manner and for studying and making myself aware of special hazards of techniques, apparatus, or chemicals in the environmental engineering laboratory. I will conform to any safety instructions presented orally or in writing by the instructor or contained in posted instructions or safety memoranda that are distributed or any other informational material. I have read the environmental engineering safety rules 1-27 above and I will observe and adhere to them.

Signature: _____ **Date:** _____

Print Name: _____

MTU Student I.D. No. _____ **Course No.** _____