

Laboratory Conduct and Safety

RULES

Laboratory Policies: Safety is a high priority when working in the laboratory; therefore, the following policies should be followed **AT ALL TIMES**. These policies apply to any person who works, or spends time, in the laboratory (students, instructors, TAs, student employees, lab personnel, etc.) and were established to fulfill national guidelines and Illinois state law for working in a laboratory.

Students are required to purchase, and wear, regulation safety goggles for their personal use in the laboratory. These goggles form a complete seal around all sides of the eyes and may be obtained at any campus bookstore or online through Amazon (*Note: the current approved safety goggles stocked in the bookstore is the Honeywell Uvex Stealth OTG safety goggles*). If the bookstore does not have the goggles in stock, this is not an excuse to not wear them for lab and you will be asked to leave. Any other type of glasses, including but not limited to regular prescription glasses or sunglasses, do not provide sufficient eye protection and are unacceptable in the laboratory. Safety goggles are to be worn **AT ALL TIMES** in the laboratory, not just when an experiment is in progress. To this end, students are expected to put their safety goggles on **BEFORE** entering the lab. If a student must remove their safety goggles for any reason, they must first leave the lab. The student may then return, once they have properly replaced their safety goggles to cover their eyes. Failure of a student to bring, and wear, safety goggles for eye protection, will result in removal from the laboratory and a grade of a zero for the experiment on that particular day.

Students are required to purchase, and wear, a regulation lab coat for their personal use in the laboratory. These may be obtained at the campus bookstore. Lab coats are to be worn **AT ALL TIMES** in the laboratory, not just when an experiment is in progress. To this end, students are expected to put their lab coat on **BEFORE** entering the lab.

- Specific policies for lab coats include: (1) Lab coats must fit properly such that it will cover the arms to the wrist without excess length or bagginess and will cover the legs to just above the knee at minimum, (2) Lab coats must be fully buttoned closed. Open lab coats will not be permitted at any time.

In addition to safety goggles and a lab coat, the following lab attire policies will be enforced for all persons in the lab:

- Students wearing lab coats may wear shirts that do not provide maximum coverage so long as they put their lab coat on **BEFORE** entering the lab and wear it the **ENTIRE** time they are in the laboratory, i.e. from the time they enter the laboratory, until the time they leave the laboratory.
- Pants must be worn that cover the entire leg, ending at the top of the shoes. Pants must cover the ankles, including the socks. Exposed ankles or socks will not be permitted. The following items of clothing are **NOT** permitted: shorts, cropped or capri pants, skirts/dresses that are not full length (i.e. must reach the tops of the shoes), tights, leggings, exercise pants, and other tight-fitting synthetic materials. Students will **NOT** be permitted to tuck their pants in their shoes or to pull their socks up over their pants to cover their ankles.
- Shoes must completely cover the foot. (Socks should not be exposed) Sandals, flip flops, clogs, open-

toe shoes, open-back shoes, boat shoes, ballet shoes, and boot that go over the pants are **NOT** permitted under any circumstances.

- Socks must be worn with ALL shoes as an extra layer of protection. (Socks should not be exposed).
- Long hair must be tied back (or confined) for both male and female students. Note: Long hair is defined as hair that is at a length that is can be tied back.
- Loose clothing is not recommended; however, if it is worn it must be confined. This includes scarves. If a scarf is worn in the laboratory, it must be securely tucked into the lab coat.
- It is important to note the following about lab attire:
 - If a student is not properly dressed when arriving at the laboratory s/he will have two options:
 - Option 1: the student may leave the lab and receive a grade of a zero for that particular experiment.
 - Option 2: the student may choose to return home to obtain the proper lab attire or call a friend to bring them the proper lab attire (*note: if the student is waiting for proper attire to be delivered, s/he must wait in the hallway*). If the student chooses this option, the following stipulation applies:
 - If the student returns to the lab more than 20 minutes after the start time of the lab, s/he will not be permitted to complete the lab and will receive a grade of a zero for that particular experiment.

It is strongly recommended that students do **NOT** wear contacts lenses in the laboratory. Chemical vapors may penetrate the contact lens material and cause the lens to adhere to one's eye, which could be detrimental to the eye. Goggles are not vapor tight and do not completely eliminate this absorption. If a student understands this risk and choses to wear contacts lenses to lab s/he must notify their TA and wear a "CONTACTS" sticker on their lab safety goggles for easy identification in case of an emergency.

Students should avoid direct contact to their skin with all chemicals. Non-latex, regulation approved, gloves will be provided for student use during all laboratory experiments.

Students should know the location of the essential safety features in the laboratory:

- Exits, Fire Extinguisher, safety shower, eye wash station, fume hood, chemical spill kit, broken glass box, first aid kit

There is **NO** food (opened or unopened) or drink permitted in the laboratory **AT ANY TIME**.

Chewing gum is not permitted in the laboratory as it can easily be contaminated with chemical vapors.

Students should **NEVER** put anything found in the laboratory (equipment, chemicals) in their mouth. When pipetting a solution in the laboratory, students should **ALWAYS** use a pipet bulb; Pipetting by mouth is **NEVER** allowed.

There is **NO** smoking or chewing tobacco permitted in the laboratory **AT ANY TIME**.

ALL chemicals should be discarded in the proper waste container, using the approved method, as instructed by the TA. Always check the label of the waste container **BEFORE** discarding waste in any container. **NEVER** pour solutions down the sink or dispose of solid waste in the trash cans.

Waste paper should **ONLY** be discarded in the designated containers, as instructed by the TA. Waste chemicals and glass should **NEVER** be discarded in these containers. Waste paper should **NOT** be disposed of in the trash cans.

Students should always be careful with glassware in the laboratory. Never use cracked or broken glassware. The TA should be notified immediately when any piece of glassware is broken. Any glass or ceramic equipment/material that breaks should be handled with care and disposed of properly, as instructed by the TA, in the blue and white designated “glass only” container located in the laboratory.

Students are **NOT** permitted to sit or lean on the laboratory benches. Chemicals may be present, though not seen with the naked eye, from previous experiments that could be harmful to skin or clothing.

Laboratory experiments involving chemicals that produce harmful vapors will be dispensed under the ventilated hoods (or other ventilated stations) located in the labs, when available.

Students are **NOT** allowed to work in the laboratory unless the TA is present. Students should wait in the hallway until the TA arrives. Students should wait to begin the experiment until **AFTER** the TA has given instructions.

Reagents should **ONLY** be used in the designated areas. Students should only take the amount of chemical needed from the reagent bottles, as instructed in the procedure, using the appropriate size beaker and funnel. **NEVER** pour chemicals from stock reagent bottles directly into graduated cylinders, test tubes, etc. **NEVER** place pipets in the reagent bottles. In the situation where too much of a chemical has been obtained, the surplus reagent **MUST** be placed in the appropriate waste container, as instructed by the TA; **NEVER** pour unused or excess reagent back into their original stock containers as it can contaminate the entire supply.

Accidents should be reported to the TA and the lab personnel immediately, regardless of how minor the injury may seem.

Students should **ALWAYS** leave the balances clean. Balances are sensitive instruments and should be used with care. To this end, (a) the students should **NEVER** move the balances and (b) if a student spills a chemical on a balance, or the surrounding area, the student should seek assistance from the TA for help in cleaning the spill. Problems with the balances should be reported to the TA.

Music is **NOT** allowed in the laboratory, under any circumstance, as it can be distracting and prevent the TA or others from hearing if a student is hurt and requires help.

Students should do the following before leaving the laboratory:

- Students should wipe down their work area with soap and water.
- Lab benches should be free of equipment.
- All glassware should be washed, dried and returned to its’ designated location.
- Wash hands with soap and water, even if gloves were used during the experiment.
- Ensure the sinks are free of glass, paper, debris, and standing water.
- All gas outlets and water taps should be turned off.