

Laboratory Safety Practices and Policies

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It is of the utmost importance that all individuals within a scientific laboratory practice safe operating procedures. One person's carelessness or ignorance of proper lab safety procedures can jeopardize the safety of all individuals in the laboratory. Adhering to the following laboratory safety principles will create a safe learning environment for the students, faculty, and staff at SU. Remember that your actions or inactions could cause injury to a fellow student. Always use common sense and, when in doubt, ask the science faculty or staff for assistance.

Proper lab attire (i.e. long pants that extend beyond the ankle and closed-toe shoes covering all skin) is required for all individuals entering the laboratory regardless of the activity being performed (e.g. wet labs, dry labs, lectures, movies, or presentations). Please note that failure to have proper lab attire and proper personal protective equipment (chemical splash goggles, lab coats, and/or gloves) will result in removal from the laboratory and the possibility of earning a "0" for the laboratory assignment. In addition, students who are reminded more than twice in a lab period to put their chemical splash goggles over their eyes will be asked to leave the laboratory and could possibly earn a "0" for the laboratory period.

Generally, when you are in the lab:

1. Understand your experiment and its associated dangers. The instructor expects you to have read the experiment before you arrive.
2. Work methodically and at an even, reasonable pace. Follow directions and use common sense as you proceed.
3. Know how to get help if something goes wrong. Learn what safety resources are available, where they are located in the lab and adjoining areas, and how to use them. Know where the emergency exits are located for the laboratories and the building.

Dress Code and Personal Protective Equipment

1. Students must adhere to the laboratory dress code requirements.
 - a. Wear closed-toe shoes that **cover the entire foot**. **No high heels, crocs, ballet flats, sandals, or flip flops**. Any shoe that does not cover the top of the foot is not acceptable in the laboratory. Socks are not an acceptable substitute for proper footwear.
 - b. Wear long pants that extend beyond the ankle and completely cover the legs. **Socks, leggings, spandex pants, tights, and yoga pants are not acceptable substitutes for long pants and are not permitted in labs**. Yoga pants are

- flexible, form-fitting pants, usually made of a spandex-like material that do not provide enough protection to be worn in the laboratory.
- c. Tie back hair as it can be singed, catch fire, become contaminated with chemicals or biological material, or get caught in moving machine parts.
 - d. Exposed midriffs are not permitted in labs, as a spill on the lab counter can splash and potentially contact these areas causing injury.
 - e. Do not wear loose sleeves. The excess fabric may knock over items, catch fire, or drag through biologicals or chemicals.
2. Lab coats must be worn while working in the laboratory and must be buttoned at all times.
 - a. Student names should be printed in marker on the back of the lab coat.
 - b. Chemistry lab coats are disposable coats made of Tyvek or a Tyvek alternative and are white. Students must use care when working around open flames in Tyvek lab coats. Tyvek can melt when exposed to direct heat.
 - c. Biology lab coats are disposable coats made of a non-woven fabric and are blue. The blue lab coats cannot be used in chemistry courses because they do not offer protection from chemical splashes.
 - d. Lab coats are to be kept in plastic storage bags in the designated storage bins within the laboratory. Some coats will be stored on designated wall coat hooks within the laboratory. Students should button their coats prior to hanging them on the wall to prevent cross contamination.
 - e. Lab coats cannot be taken back and forth between laboratories.
 3. Chemical splash goggles have guards on the side of the face and a shield on the top of the goggles that meet the forehead. They provide both splash and impact protection. Prescription glasses provide little protection to the eyes so goggles should be worn over them. Contact lenses are unacceptable as eye protection.
 4. It is not recommended to wear contact lenses in the laboratory. If a splash to the eye were to occur, there is the potential for the chemical to seep under the lens. The contact lens will not only hold the chemical on the eye but will also hinder subsequent rinsing of the eye. Inform your instructor at the beginning of the semester if you wear contact lenses and ensure you wear the safety goggles when conducting work in the lab.
 5. Protection of the eyes is essential in any laboratory activity. Chemical splash goggles must be worn anytime there is the possibility of a splash hazard to the eyes or face. Specifically, they must be used in the following scenarios:
 - a. Handling chemicals hazardous to the eyes.
 - b. Using chemicals with unknown hazards.
 - c. Working with gases.
 - d. Working with liquids which are hotter than 60°C or 140°F.
 - e. Working with solid materials (i.e. glassware) or equipment under stress, pressure, or force that might cause fragmentation or flying particles.
 - f. When dust or fumes are present.
 - g. Working with preserved specimens during dissection activities.

6. Face shields provide protection to the face and throat from flying particles and liquid splashes. For maximum protection against chemical splashes, a face shield must be worn with chemicals splash goggles. Face shields should be worn when working with large volumes of hazardous materials or when implosion or explosion hazards exist (flying particles).
7. There is no one glove that is protective against every chemical used on campus. For this reason, the School of the Sciences provides different types of gloves for use in the laboratory. Make sure to use the correct gloves when working in the laboratory. Rings should not be worn under gloves as they may cause punctures.
8. Remove one glove and use the ungloved hand when touching any surface in common areas such as hallways, keyboards, door knobs, elevator buttons, etc. that other people, without protection, may also touch. The idea is to prevent cross contamination.

Personal Safety

1. **Do not eat, drink, chew gum, apply any lip products and/or make-up, or put any pens, pencils, or gloves in your mouth during laboratory time.** Biological and chemical airborne toxins may contaminate any substance that may ultimately end up in or near your mouth. It is best to minimize the possibility of contact.
2. Never taste biologicals or chemicals.
3. Students may not remove any biologicals, chemicals, or reagents from the laboratory areas without the permission of the instructor.
4. Students must wash their hands with soap and water whenever reagents contact the skin. **Students must wash their hands before leaving the laboratory.**
5. Students should never use their mouth to pipette liquids. Use the provided pipettors.
6. **Students may not work alone in laboratories.** A science faculty member should always be present in the laboratory. If s/he is unavailable, two students or a student and a member of the laboratory staff must be present in the laboratory at all times while lab work is in progress.
7. All students must keep cell phones, extra books, clothing, and personal possessions away from the laboratory workbench as they can become contaminated. Only the items necessary for lab are to be brought to the laboratory workbench. Store all possessions in the designated areas in the laboratories. Do not store them on the floor or in the isles where someone may trip over them.
8. Cell phone use, including texting, is not permitted during lab. Generally, cell phones are not intrinsically safe and could cause a spark in an environment with ignitable vapors. There is also a potential for contamination with biologicals or chemicals used in the

laboratory. Your cell phones should be left in your book bags and placed in the designated storage areas.

9. Do only the assigned laboratory experiments as described in the directions. Do not change the procedure unless the instructor has approved it. Do not perform more than one laboratory experiment at a time as you may end up obtaining poor results from both. In addition, the accidental mixing of reagents from different experiments may be dangerous.
10. Check labels on bottles of biological and chemical reagents twice before removing any of the contents. Many chemical names and many genus-species names sound similar. Do not take more biological or chemical than is needed by the laboratory exercise. Your instructor will tell you if any reagent or organism is particularly hazardous. In general, all chemicals and all biological specimens or organisms should be considered hazardous.
11. To prevent contamination of chemical stocks, never return unused chemicals to the original containers.
12. Always hold containers away from your body when transferring reagents from one container to another or heating a reaction.
13. **All acids should be handled with extreme care.** The proper dilution of an acid is to add the acid to water with a swirl or stir. Never add water to an acid. Be advised that heat may be produced. **Helpful Hint: Remember A to W – Acid to Water – Alphabetical Order!**
14. To determine the odor of a chemical, waft the vapors toward your nose with your hand. Never place your nose directly over a bottle or test tube and sniff.
15. Do not use broken or cracked glassware and only use fire polished glass tubing.
16. When inserting any long thin piece of glass (such as a thermometer, glass tubing, funnel end, glass rod, etc.) into a rubber stopper or cork, **protect your hands** with a cloth towel or several paper towels. Hold the glass tubing close to the end (nearest the stopper), gently pushing and twisting it into the stopper. Use water or glycerin to lubricate the glass before insertion.
17. When removing an electrical plug from its socket, grasp the plug and not the cord. Ensure hands are completely dry before touching an electrical switch, plug, or outlet.

Housekeeping

1. The laboratory should be kept clean by wiping down the counter with soap and water after each laboratory experiment. Microbiology lab benches must be disinfected with an EPA registered disinfectant after each laboratory experiment.

2. Return chemicals and equipment to their proper places, dispose of trash, and make sure the drains are uncluttered.
3. When using gas or vacuum outlets, make sure they are turned off before leaving the laboratory.
4. Students should not leave their chemical splash goggles in the lab coat storage bins located in the laboratories. The bins are only large enough for the storage of lab coats.

Medical Conditions

1. Tell your instructor at the beginning of the course if you are pregnant, have an **allergy or medical condition** that may be affected by course activities involving exposure to biologicals and/or chemicals. Examples may include indoor allergies, outdoor allergies, and chemical sensitivities. If your allergies are severe and may require the use of an Epi-pen, please let your instructor know where you keep your Epi-pen. If you are pregnant, or have a medical condition that requires regular medical management and/or places you at risk, you must review and complete the Medical Informed Consent for Student Laboratory Work.
2. **Potential Exposure to Reproductive Toxins** - There is the potential for exposure to chemicals classified as reproductive or developmental toxins in Stevenson University laboratories. Reproductive toxins cause adverse health effects of the reproductive organs, endocrine system, or gametes (egg or sperm). Some of these health effects include menstrual dysfunction, impaired fertility, feminization/masculinization, or the inability to maintain a pregnancy. Developmental toxins adversely affect the developing organism at any time from conception to sexual maturity. Effects include spontaneous abortion, structural or functional defects, low birth weight, or issues later in life.

It is the policy of Stevenson University to establish procedures to minimize the potential for adverse health effects to the reproductive health of our students. Any student registered for a laboratory course who is, or suspects that she might be pregnant, must contact the Laboratory Safety Manager to evaluate the presence and use of reproductive or developmental toxins in the laboratory course(s) in which the student is enrolled. Those risks will then be communicated to the student, and the student shall be responsible for communicating those risks with her treating physician. The student and the treating physician will then make the decision as to whether the student should continue participating in laboratory courses at Stevenson University during the course of the pregnancy. The Laboratory Safety Manager and the Dean of the School of Sciences will make appropriate accommodations as necessary.

Students with Service Animals Enrolled in Laboratory Courses

Stevenson University recognizes the importance of service animals to individuals with disabilities. The University is committed to providing safe access to all individuals with service animals, as well as to the service animals. The regulations to Titles II and III of the American with Disabilities Act (ADA) define a service animal as a dog that is individually trained to do

work or perform a task for a person with a disability. These regulations permit service animals to accompany people with disabilities in all areas where members of the public are allowed to go. A service animal can only be asked to be removed if the animal is out of control and the animal's handler does not take effective action to control it or the animal is not housebroken. The service animal must be under the control of the handler via harness, leash, or other tether, unless this would interfere with the service animal's safe and effective performance of work or tasks, in which case the service animal must be otherwise under the handler's control via voice control, signals, or other effective means.

The majority of the School of the Sciences laboratories are considered safe locations for a service animal to occupy. However, there are specific laboratories, as well as specific experiments, that could cause harm to a service animal. There may also be laboratories where a service animal poses a direct threat to health and safety or to specific research being conducted that cannot be reduced or eliminated by a reasonable accommodation. During those instances, the service animal will not be allowed into the laboratory and an acceptable alternative arrangement will be agreed upon by all parties.

The following procedures involve the Office of Disability Services, the student with disabilities, the Laboratory Safety Manager, and the program department chair to ensure the safety of the student, service animal, and laboratories:

- The determination of whether or not a service animal may accompany a student with a disability into a laboratory will be determined on a case-by-case basis.
- Only qualified service animals will be provided access to the laboratories. Animals whose sole function is to provide emotional support will not be allowed in the laboratories.
- Students requesting the presence of a service animal within the laboratories must submit a request to have the animal with them with the Office of Disability Services.
- The Director of Disability Services will provide the Laboratory Safety Manager with the courses and room numbers of any student with a service animal who wishes to have their service animal occupying the laboratories prior to the start of the semester.
- The Laboratory Safety Manager will identify any laboratories that would be deemed unsafe for the service animal and/or any specific experiments that would be deemed unsafe for the service animal based on severity of risk to the service animal.
- The Laboratory Safety Manager will identify any laboratories that the service animal will not be allowed to enter due to the possibility of harm to research experiments within that laboratory.
- The Laboratory Safety Manager will determine safe locations for the student and service animal within the laboratories that the service animal will be occupying.
- The student and the Office of Disability Services will be responsible for providing any personal protective equipment for the service animal to ensure its safety within the laboratory, which may include but is not limited to booties, eye protection, and a mat for the floor.
- If the service animal will not be allowed in a laboratory, alternative accommodation options will be considered for the student. This assessment will include an interactive process between the student, the Director of Disability Services, the Director of Laboratory Services, and the Laboratory Safety Manager.

Students should contact Disability Services at 443-352-4920 for further information regarding the University's policy on service animals.

Heat/Burn Safety

1. Heating objects may cause adjacent objects to also become hot. Ringstands, clamps, hot plates, stirrers, Bunsen burners, and other objects near the flame or hot plate may be hot or at least warm. Keep hot objects out of the way when cooling. Students should leave a note if a hot object is left out to cool to prevent another individual from burning him/herself. Use tongs or heat protective gloves if moving heated objects. Do not place any hot objects on paper towels. Hot objects placed on paper towels may ignite the towels.
2. Students should never dispense flammable liquids near an open flame or heat source.
3. Students should ensure that all hot plates or Bunsen burners are turned off prior to leaving the laboratory. Students should never leave a lit burner, anything being heated, or anything visibly reacting unattended.
4. Students should take extreme caution when heating and boiling liquids in test tubes. Never point the open end of the test tube towards your body or anyone else's body.

Fume Hoods and Biosafety Cabinets

1. Fume hoods may be required for all or part of the laboratory experiment. Students must use fume hoods when instructed to do so and should understand the importance of their use for the assigned laboratory experiment. The following procedures should be followed when using a fume hood:
 - a. Fume hoods should be monitored to ensure proper face velocity of around 100 fpm. If you believe the fume hood is not working properly, immediately stop working within the fume hood and inform SU faculty or staff.
 - b. Working fume hood sash height should be no higher than 18 inches and generally no lower than 12 inches. Use the sash stop of the fume hood as a guide to the proper sash height. To reduce energy costs, the fume hood sash should be pulled all the way down when the hood is not in use.
 - c. Experiments should be performed 6 inches within the fume hood to prevent fumes from escaping into the laboratory.
 - d. Keep the amount of equipment in the fume hood to a minimum to prevent turbulence.
 - e. Do not allow Kim Wipes or paper towels to be sucked into the back of the fume hood. They may lodge into ducts and fans and can affect the operation of the hood.
 - f. Be aware that walking in front of an operating fume hood, as well as working within the fume hood will alter the velocity and affect flow.
 - g. Small beaker fires can be extinguished within the fume hood by suffocation using a watch glass or another piece of glassware. Anything larger than a small beaker fire should never be extinguished by students. The fume hood sash should be

closed and the laboratory evacuated. The fire alarm should be pulled while exiting the building to alert the fire department and others within the building.

2. Biosafety cabinets may be required to be used during experimentation or research with biological agents. Biosafety cabinets are enclosed, ventilated workspaces designed to protect the user from exposure to biological agents. There are three classes of biosafety cabinets that provide different levels of protection. Depending on the level, the cabinets provides personnel, product, and environmental protection against harmful contaminates.
 - a. Biosafety cabinets should not be confused with fume hoods, which offer protection from chemical exposure. Chemicals should not be used within the Biosafety cabinet as the HEPA filters are not designed to contain chemical dust, fumes, or vapors. Biosafety cabinets clean the air and circulate it back into the laboratory.
 - b. All SU biosafety cabinets are equipped with UV light for its germicidal effects. If a UV light is being used, it must be turned off prior to using the cabinet.
 - c. Be careful not to cover grill slots with any work materials as this will affect the operation of the cabinet.
 - d. Biosafety cabinets should be wiped down with an alcohol solution before and after each use to prevent contamination of work materials.

Waste Disposal

There are different types of waste streams, including hazardous waste, biohazardous waste, and nonhazardous waste. Each waste stream is disposed of in a different manner. Hazardous waste and biohazardous waste are carefully tracked to ensure individuals, property, and the environment are not in danger during the disposal process. Likewise, a designated nonhazardous waste stream may also exhibit some hazardous properties. Therefore, it is important to be cognizant of all types of waste. If you are unsure of how to properly dispose of your waste, please ask a SU faculty or staff member.

1. Non-contaminated broken glass should be placed into broken glassware bins (labeled cardboard boxes), which can be found throughout the laboratories.
2. Waste from all chemistry laboratory courses should be discarded into the 1, 2, or 4-liter pre-labeled containers, which will be put out for each laboratory exercise. These waste collection containers will typically be placed in the fume hoods at the beginning of class. The Chemistry Laboratory Manager will perform the segregation and ensure proper waste storage. If you are disposing of your own waste, you must include the words “Hazardous Waste” on the container. You must also include the chemical name, the amount, the concentration, and the accumulation start date. No chemical symbols or abbreviations are permitted. All hazardous waste containers must be within secondary containment to prevent leaks.
3. All chemical waste from biology will be collected in pre-labeled 4-liter amber glass jugs for disposal. All gram stain, dissection preservative, and gel buffer wastes must be collected for disposal. All waste bottles must be within secondary containment to prevent

leaks. If the waste bottle has a hinged lid funnel attached, the funnel must be kept closed except when adding waste to the container.

4. Any gels containing Ethidium Bromide, Propidium iodide, Acridine Orange, SYBR Green I, SYBR Green II, SYBR Gold, GelStar or any other mutagenic dye must be disposed in the labeled white buckets with the red flip top lids. Like all waste containers, the lid should be opened only when adding or removing waste from the container.
5. Disposable test tubes, having been emptied of waste and rinsed once with water, should be placed in the proper labeled receptacle. The Biology and Chemistry Laboratory Managers will dispose of the test tubes.
6. Chemical solid waste goes in the designated solid waste containers in the lab. Some solid wastes may be placed in the regular trash. You must check with your instructor before disposing of any chemical in the trash.
7. Pasteur pipettes, slides, and other contaminated items that can puncture or pierce a bag, should be placed in a "Sharps" container. These are labeled receptacles found throughout the laboratories. They include a small labeled biohazard cardboard sleeve or a green non-biohazard plastic bin. Needles, syringes, scalpel blades, razor blades, or blood tubes must be disposed in puncture resistant and leak proof containers. These containers are available in red for biohazard contaminated sharps and white for chemically contaminated sharps. Both are equipped with a clear lid that limits accidental or intentional access to used sharps.
8. Disposable laboratory coats need to be disposed of properly at the end of each semester. If used in Microbiology laboratory courses, they will need to be autoclaved prior to disposal. The Biology Laboratory Manager will leave autoclave bags out for collection of the coats on the last day of labs. All other Biology and Chemistry laboratory coats may be disposed in the general waste unless they are grossly contaminated with chemical residues (spill on coat). The Biology and Chemistry Laboratory Managers will provide waste bags for collection of the coats on the last day of lab. **For those who choose to wear cloth coats, they will need to be sent out for professional cleaning at the end of the semester. The student is responsible for the cost of the cleaning service. Students should contact the Laboratory Safety Manager to arrange cleaning.**

Safety Data Sheets (SDS)

Safety Data Sheets (SDS), previously called Material Safety Data Sheets (MSDS), are documents supplied by the manufacturer of the chemical or biological that outline physical and chemical properties, health hazards, exposure limits, reactivity and flammability levels, storage and spill instructions, first aid, and regulatory information.

1. SDS must be accessible to faculty, staff, and students at all times. Paper copies can be found in binders in N135 and N164B.

2. Students may also access the SU SDS online service provider through the “Laboratory Safety Resources” course in Blackboard and the SU Portal under the “Academic Resources” tab. Students will be able to search by chemical name, manufacturer name, and/or chemical location. All questions regarding the SDS online service should be directed to the Laboratory Safety Manager. Note that the name of the company managing the University’s online SDS system is MSDS Online.

Chemical Labeling

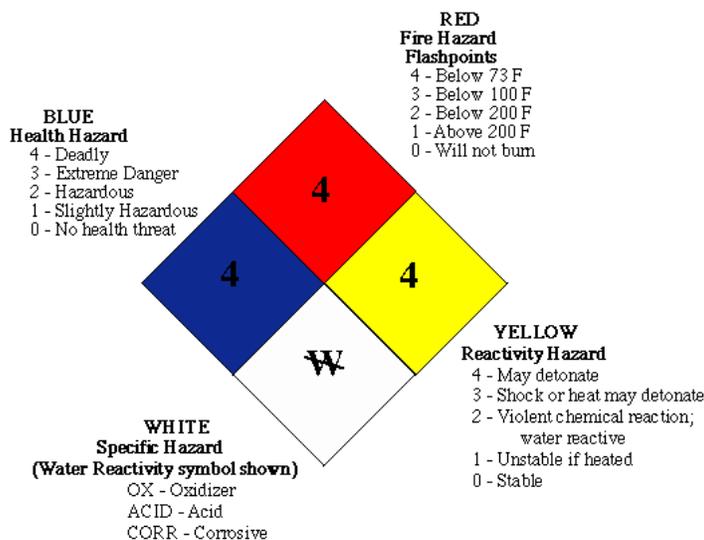
1. Primary Container Labeling (Manufacturer Label)
OSHA’s Hazard Communication Standard with the Globally Harmonized System (GHS) for the Classification and Labeling of Chemicals
 - a. Classification of Hazards
 - i. Under the revised OSHA Hazard Communication Standard, a hazardous chemical is defined as a chemical that meets the definition of a health hazard class, a physical hazard class, or it is a simple asphyxiant, combustible dust, or pyrophoric (spontaneous combustible) gas. The majority of the health and physical hazard classes also include category classifications within each specified class.
 - b. Communication of the Hazards
 - i. The use of SDS (see above)
 - ii. Chemical labeling – There are six different sections to the GHS compliant labels
 - a. Product Identifiers – Unique names or numbers used on a hazardous product label or in a safety data sheet
 - b. Signal Words – One word used to indicate the relative level of severity of a hazard and alert the user
“Warning” for less severe hazard categories
“Danger” for more severe hazard categories
 - c. Hazard Statements – Phrase assigned to each hazard class and category that describes the nature of the hazard
 - d. Precautionary Statements – Phrases that describe recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous product, or improper storage or handling of a hazardous product
 - e. Supplier Identification – Must include the name, address, and telephone number of the manufacturer or supplier of the substance
 - f. Pictograms – A symbol with other graphic elements intended to convey specific health, physical, and environmental hazards of a chemical

GHS Pictograms and Hazard Classes		
<p>pic 1803</p>  <p>Oxidizers</p>	<p>pic 1802</p>  <p>Flammables Self Reactives Pyrophorics Self-Heating Emits Flammable Gas Organic Peroxides</p>	<p>pic 1801</p>  <p>Explosives Self Reactives Organic Peroxides</p>
<p>pic 1809</p>  <p>Acute Toxicity (severe)</p>	<p>pic 1808</p>  <p>Corrosives</p>	<p>pic 1804</p>  <p>Gases Under Pressure</p>
<p>pic 1807</p>  <p>Carcinogen Respiratory Sensitizer Reproductive Toxicity Target Organ Toxicity Mutagenicity Aspiration Toxicity</p>	<p>pic 1806</p>  <p>Environmental Toxicity</p>	<p>pic 1805</p>  <p>Irritant Dermal Sensitizer Acute Toxicity (harmful) Narcotic Effects Respiratory Tract Irritation</p>

2. Workplace Container Labeling (Secondary Container Labeling)

National Fire Protection Association (NFPA 704 Diamond) label

- a. This system uses a diamond shape symbol with color coded categories of hazard. The diamonds will contain a hazard rating range of 0-4 indicating the degree of hazard associated with that chemical. **Helpful Hint: The higher the number, the more hazardous the chemical is for that category.**
 1. Red indicates flammability
 2. Blue indicates health
 3. Yellow indicates reactivity
 4. White indicates a specific or special hazard such as water reactive, acids, bases, oxidizers, or corrosives.
- b. The NFPA labeling system will be used for marking secondary containers as well as chemical storage areas on campus.



Accident Guidelines

1. **ANY ACCIDENT, PHYSICAL OR CHEMICAL, MILD OR SEVERE, MUST BE IMMEDIATELY REPORTED TO THE INSTRUCTOR. ANY ACCIDENT REQUIRING FIRST AID OR CPR MUST BE REPORTED TO SECURITY AND THE LABORATORY SERVICES TEAM. SECURITY SERVES AS SU'S FIRST RESPONDERS.**
 - a. **Security can be reached in the following ways:**
 - Dial "4500" from any in-house phone. This will connect you with the Security Office on Owings Mills. They will alert Security on Owings Mills North.
 - Dial 443-352-4500 from any phone to contact the Security Office on Owings Mills directly. They will alert Security on Owings Mills North.
 - Dial 410-486-7000 from any phone. Be prepared to tell the operator your location and emergency. S/he will contact Security for you.
 - b. **The Laboratory Services Safety Team can be reached in the following ways:**
 - Contact information for all Laboratory Services Team members is posted near the telephones in all laboratories.
 - The Laboratory Safety Manager's office is located in N160.
2. If a **flammable, volatile substance** spills on any surface, make sure all flames in the laboratory are immediately extinguished. Disconnect any equipment that might generate a spark. All experiments should be stopped immediately. If the instructor tells you to evacuate the lab, follow instructions. Prior to cleaning up the spill, the Laboratory Services Team should be contacted to evaluate the spill and determine if the faculty or staff member can safely clean up the spill, or if the Laboratory Services Team will handle the cleanup.
3. If a **chemical splashes a large area of a person's body**, immediately get the person under the safety shower and remove all contaminated clothing while the water is rinsing. Lukewarm water should flow across the affected area for at least 15 minutes. A mild

detergent may be used to clean the area further, followed by a lukewarm water rinse. Do not apply any medications until medical assistance arrives and advises. Security and the Laboratory Services Team must be notified for any chemical splashes that require the use of the safety showers.

4. If a **chemical splashes a small area of a person's body**, run lukewarm water over the affected area immediately and continue to flush the skin for at least 15 minutes. The instructor will advise on further care. Security and the Laboratory Services Team must be notified for any chemical splashes that contact the body.
5. If a **chemical splashes into the eye(s)**, act fast. Get to the eye wash, force your eyes open and rinse for at least 15 minutes with lukewarm water. Move your eyes around while rinsing so the water can get to all parts of the eye. Security and the Laboratory Services Team must be notified for any chemical splashes that contact the eye. If further medical attention is needed, Security will notify emergency response personnel.
6. If a **chemical splash occurs to the face when you have chemical splash goggles on**, *do NOT take the goggles off*. Wash the goggles (as if they were part of your face) with lukewarm water and when the chemical is gone, remove the goggles and wash the face further if needed. Security and the Laboratory Services Team must be notified of any chemical splashes that contact the face.
7. If a **chemical is ingested**, the course of action will be dependent on the nature of the chemical. Call for medical assistance by contacting Security or by dialing "911" directly from any campus phone. Always check the SDS for suggested protocol. Security and the Laboratory Services Team must be notified for any chemical ingestion. You may also contact poison control at 1-800-222-1222.
8. A **cut or wound** should receive immediate attention and should be carefully protected from contamination. If the cut or wound is bleeding and requires First Aid, Security and the Laboratory Services Team must be notified. First Aid kits are available in all laboratories.
9. If a **person falls unconscious**, alert the instructor who will seek medical attention. Unconsciousness and/or respiratory failure could be caused by inhalation of a substance, electric shock, or skin contact with certain chemicals. Security and the Laboratory Services Team must be notified if a person falls unconscious.
10. All **burns** from flames, heat, or chemicals, are treated by running **cool water** (do not use ice or ice cold water) over the affected area until it does not hurt anymore. Security and the Laboratory Services Team should be notified of any burns. Security and the Laboratory Services Team should decide if further medical attention is necessary. Burns to the face or hands should be sent off campus for further medical evaluation.
11. If a **fire** should occur in the laboratory, faculty, staff, and students must evacuate and the fire alarm pull station near the exit door must be activated. If the fire occurs within a fume hood, the sash should be closed, if possible. Students are not permitted to use fire

extinguishers in SU laboratories because they have not received the proper training. Faculty, staff, and students should meet at the assembly areas, which are based on location at the time of alarm. Refer to the posted Emergency Evacuation Routes in your area to determine which assembly area to report to.

- Assembly Area 1 – Grass median between Academic Center and School of Design parking lot.
- Assembly Area 2 – Grass area next to the Facilities trailer.
- Assembly Area 3 – Grass area in back parking lot.
- Assembly Area 4 – Grass area along the fence line.
- Assembly Area 5 – Grass area between the Academic Center and School of Design buildings.

12. If your clothing catches on **fire**, **STOP** what you are doing, move away from the fire source, **DROP** to the ground, and **ROLL** to smother the flames. Another person could use the fire blanket to further smother the flames, or someone could walk you to the shower. In either case, do not run because running will rekindle or enhance the fire and it can cause increased respiratory intake of heat, which is very damaging to the lungs. A drawback of the fire blanket is if it is wrapped around a burn victim for too long a time period, the heat can become trapped within the blanket potentially causing greater burn damage. Others in the room should turn off the fuel supply to the original source of the flame and call “911” and Security for additional help.