



# Perimeter College Safety Training



Georgia State University  
University Research Services & Administration  
Office of Research and Environmental Safety

Revised August 2016

## Board of Regents Training Requirements

The following is required for all students, staff, and faculty receiving payment from the Board of Regents.

- 1) Right-2-Know Training  
(BOR Training at <http://www.usg.edu/facilities/rtk-ghs> )
- 2) Hazardous Waste Awareness  
(BOR Training at <http://www.usg.edu/facilities/training/hazwaste/10.phtml> )
- 3) Introduction to Bloodborne Pathogens  
(BOR Training at <http://www.usg.edu/facilities/training/pathogens/>)

For students, BOR trainings are only recommended as an additional resource alongside GSU Perimeter College Laboratory Safety Training.

# Responsibilities

## Department Chair

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### **Must:**

- Ensure that prior to beginning courses at Georgia State University Perimeter College, each Instructor using hazardous materials implements the University Laboratory Safety Manual and any department-specific laboratory safety plan(s) within their respective laboratory space(s).
  - Ensure that all Instructors, laboratory personnel, students and other authorized personnel allowed access to the laboratories where hazardous materials are used have received all necessary and required training in laboratory safety policies and procedures.
  - Ensure that appropriate facilities and safety equipment are available and appropriate PPE is used for teaching activities involving hazardous materials.
  - Provide leadership and support of laboratory safety.
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# Responsibilities

## Instructor

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### **Must:**

- Ensure that all laboratory personnel have the proper training before allowing them to work in a laboratory using hazardous materials. Training shall include (but not be limited to):
    - Job specific safety protocols for laboratory equipment and hazardous materials are followed.
    - How to locate and communicate knowledge and comprehension of the LABORATORY SAFETY MANUAL, and the information related to Safety Data Sheets (SDS) and all safety and compliance training required by University policy.
    - Methods for maintaining training records so that they are readily available to inspectors
  - Ensure that all applicable safety and compliance records are maintained as required by Federal, State and Local regulations and University policy.
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# Responsibilities

## Laboratory Personnel

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### **Students Must:**

- Obtain training on laboratory specific hazards and emergency procedures before working in a laboratory or facility using hazardous materials.
  - Understand all laboratory specific safety protocols for laboratory equipment and hazardous materials within the laboratory.
  - Complete all safety and compliance training that is required by University, federal, and local policy.
  - Maintain current training records through iCollege.
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# Responsibilities

## Laboratory Personnel

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- Comply with all policies, regulations, and procedures regarding the proper procurement, storage, use, and disposal of all hazardous materials being used.
  - Immediately inform the Instructor of any hazardous situation or situation that has the potential to become hazardous.
  - Follow all laboratory guidelines.
  - Do **not** proceed with a process unless safety is addressed and is completely understood.
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# Responsibilities

## Laboratory Personnel

Staff and Students are responsible for wearing the appropriate, protective attire in the laboratory

What type of clothing should be worn?

- Long pants, sleeves (long or short), laboratory coat or apron, safety glasses and appropriate gloves.
- **Strapless tops, mid-drift tops, shorts, and short skirts/dresses are PROHIBITED**

What type of footwear is needed in the laboratory?

- Shoes should be a solid material (preferably impervious to liquids) that cover the toes, top of foot and heel.
- **Sandals of any type, mesh shoes and ballet slipper type shoes are PROHIBITED**



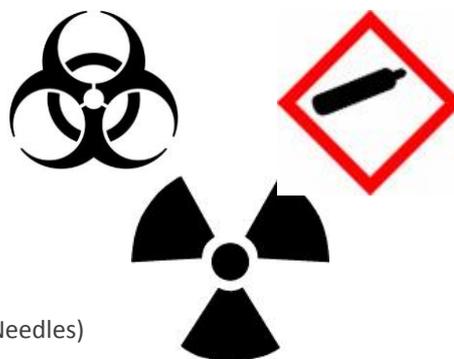
## Hazards In Your Laboratory

- A **Hazardous material** is any item which has the potential to cause harm to humans, animals or the environment.
- **Hazard** is:
  - The probability that an injury will occur.
  - Or rather...
  - The possibility that an individual will receive a toxic dose.
- **Toxicity** is the capability of a chemical to produce injury. Almost any substance is toxic when taken in doses exceeding the "tolerable limits".

## Possible Hazards In Your Laboratory

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- Toxic
- Flammable
- Reactive Chemical
- Biological
- Radiological
- Electrical
- Flammable Gas
- Compressed Gas Cylinders
- Sharps (Broken Glass, Razors, Needles)
- Untrained personnel



## Hazard Awareness

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- It is important for laboratory personnel to **be aware of the possible hazards in the laboratory.**
- Remain aware of safe laboratory practices and the proper guidelines for hazardous materials use, storage, and disposal.
- Assume that any mixture will be more hazardous than its most hazardous component and that all substances of unknown hazard are indeed hazardous.
- Follow the guidance provided by your instructor. Comply with all laboratory guidelines. **Ultimately, YOU are responsible for your own safety!**

## Safe Laboratory Practices

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Can you have food in the laboratory?

**NO!** No food or drinks allowed in any portion of the laboratory at any time.



## Safe Laboratory Practices

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- **Never have food or drinks in any portion of the laboratory at any time.**
- Remember that laboratory doors must remain closed at all times to reduce exposure of non-laboratory personnel to hazardous materials.
- Never obstruct laboratory aisles, exits, emergency equipment or utility controls.
- Always wash your hands before and after conducting laboratory activities.

## Safe Laboratory Practices

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- Prevent exposure to toxic chemicals by using fume hoods or other local ventilation devices.
  - Do not smell or taste hazardous materials.
  - Always **use the appropriate personal protective equipment** (PPE) when working in areas where hazardous materials are in use.
  - Practical jokes and other behavior that might confuse, startle or distract another student is prohibited in laboratories.
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## Laboratory Security

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- Safeguarding University resources from unauthorized access, misuse or removal is the responsibility of all faculty and staff.
  - In the laboratory, this obligation rests primarily with the Instructor;
  - However, **all laboratory personnel have a responsibility to take reasonable precautions against theft or misuse of materials**, particularly those that could threaten public and environmental health.
  - **All hazardous materials** must be secured or under constant surveillance at all times.
  - Immediately question the presence and notify your Instructor of unauthorized or unknown persons in an area where hazardous materials are used or stored.
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## Hazardous Material Exposures

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- Eye Contact: Promptly use eye wash station to flush eyes with water (for at least 15 minutes) and immediately notify your instructor.
- Ingestion: Immediately notify your instructor. The local Poison Control Center or local hospital will be contacted.
- Skin Contact: Promptly flush the affected area with copious amounts of water and notify your instructor if the problem is not resolved or the injured is still experiencing difficulty.
  - Remove any clothing that may have chemical contamination to prevent further exposure.
- Spills: Immediately notify your instructor. The spill will be cleaned up with the appropriate spill cleanup supplies and procedures.



## Accidents or Incidents: What to do?

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- Ask for help
- Notify your instructor
- If you have a needle stick injury or cuts: wash with soap and water
- If you have splashes: flush eyes, mouth, nose
- If required: Go to the nearest Hospital or Clinic
- Monitor for symptoms
- In case of an accident, Within 24 hours, submit the Incident/Accident Report: <http://safety.gsu.edu/risk-management/insurance-claims/general-liability-2/>

For emergencies – Contact **GSU Perimeter College Police**

**404-413-3333**



# Chemical Storage

- All non-waste hazardous chemical containers in storage **must** be:
  - clearly labeled to show the contents
  - in good condition
  - Do not have precipitate around the bottle/lid
  - Has not been contaminated or stored improperly



If the container is *dusty*, *rusty*, or *crusty*, consider it **HAZARDOUS WASTE**

If the chemical has *expired*, it is **HAZARDOUS WASTE**

# Hazardous Materials Storage

Chemicals that are not being used daily must be returned to their proper storage.

Do **NOT** overfill shelves or stack containers on top of each other



# Hazardous Material Storage

- How should you store chemicals that are flammable, corrosive or reactive?
  - Appropriately rated storage cabinets should be used for chemicals with these specific hazards.



Reactive



Corrosive



Flammable

# Hazardous Materials Storage

Store liquid waste apart from chemicals in use which are not waste





## Chemical Segregation

Once in a proper location or cabinet, chemicals should be segregated by:

- **Hazard Type**
  - Ex. Acids away from bases, oxidizers from reducers and organics, cyanides from acids, etc. **The EPA will look at chemical storage during an inspection!!**
- **Then by solids & liquids.**
  - Liquids on the bottom shelves and solids above.
- **Alphabetically-** Only AFTER sorted by hazard and physical state.



Incompatible chemicals should be separated by a wall, berm, dike, etc. (40 CFR § 265.172)

## Waste Management

All waste containers must be **closed** except when adding or removing wastes.

**Open funnels should NOT be stored in containers! This is considered venting and is prohibited**



# Compressed Gases

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- Must be secured to a wall or table.
- Must be capped when not in use and labeled as full or empty
- When empty or no longer needed, returned to the manufacturer.
- **Notify** the instructor if you notice unsecured cylinders



## Managing Hazardous Waste

### Waste Minimization

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- In addition to safely handling and properly labeling and storing hazardous waste, another key part to managing Hazardous waste is *Waste Minimization*
- Waste minimization reduces the amount of waste our environment must bear and reduces cost of managing those wastes.

STAY SAFE! GOOD LUCK!

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**KEEP  
CALM  
AND  
HAVE FUN  
LEARNING**

