



GENERAL SAFETY MANUAL (PLAN)

Revised July 1, 2021
Responsible Office: Safety and Risk Management
Division: Operations, Finance, & Administration

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GENERAL INFORMATION

Grambling State University, in its efforts to provide safe and efficient services to its students, faculty, staff and visitors, has developed and implemented a comprehensive safety and loss prevention plan identified as our General Safety Manual (Plan). This manual includes information, policies and procedures designed to assist Grambling State University as it complies with LA R.S. Title 39, Section 1543-4.

The General Safety Manual contains safety concepts, policies, and procedures ideal for the daily operations at Grambling State University. It is the responsibility of each department to have a sufficient safety program and that plan is outlined within this General Safety Manual for the benefit of every employee. It is the intent for this general safety manual to serve as a readily available reference for the most common situations that may arise in addition to the support from designated department heads and executive leadership.

GENERAL SAFETY MANUAL

The General Safety Manual is a University Policy. The safety manual is reviewed during new-hire orientation and when changes are made.

COMPLIANCE WITH UNIVERSITY POLICIES

This is a non-negotiable. All employees must comply with the policies and procedures that are documented in the Grambling State University General Safety Manual.

If an employee does not comply with the rules and regulations set forth in the <u>General Safety Plan</u> , the University has the right (and duty) to take action and may chose non-disciplinary or disciplinary action against any non-compliant employee, depending on the seriousness of the infraction.
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UNIVERSITY POLICIES & PROCEDURES

GSU university policies and procedures on located on the webpage

<https://www.gram.edu/faculty/policies/>

GENERAL SAFETY PROGRAM

Grambling State University's General Safety Program is designed to meet the requirements of Louisiana Office of Risk Management (ORM) Loss Prevention Program agency classification. Effective July 1 of each Fiscal Year, the Office of Risk Management classifies each audited state agency as either Class A or Class B based upon the results of the agency's most recent audit or compliance review. This classification determines how often, monthly or quarterly, the agency is required to conduct safety meetings and building inspections.

The audit is a "university-wide audit", that means it is a unified process which requires everyone to meet the compliance expectations.

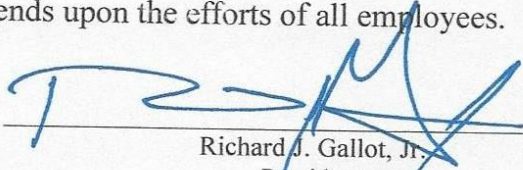


GENERAL SAFETY MANUAL MANAGEMENT POLICY STATEMENT

A major goal of Grambling State University is to provide efficient services to its students, employees and visitors by providing a safe environment. The responsibility for administration of the safety policies and procedures is a function of managers and supervisors at the various levels. However, all employees must take personal action and responsibility for their own safety and well-being. All individuals must follow safety rules, use safety devices, support safety programs, and offer constructive suggestions for improving the safety program.

Grambling State University must adhere to and comply with all state, federal and local safety requirements, codes and standards. Managers will implement a safety program with your protection in mind. This task is accomplished with the assistance of the safety officer and the safety committee through training and safety education. Employees and students are expected to report all accidents to responsible personnel. Managers are also required to report, investigate and document the circumstances of accidents and "near misses" in their areas.

It is the intention of the university to provide excellent supervision, effective training and safe equipment on the job. The success of Grambling State University's safety and loss prevention program depends upon the efforts of all employees.



Richard J. Gallot, Jr.
President

GENERAL SAFETY POLICY STATEMENT

Grambling State University is fostering a culture of safety. Focusing on a Culture of Safety will ultimately lead to greater controls of exposure and protect workers, the environment and the overall community at Grambling State University. WHERE EVERYBODY IS SOMEBODY, we all play an important role in the growth and sustainability of our educational institution. With the support of every employee, we systematically eliminate noncompliance, manage risk, improve performance, increase productivity, and build rapport and positive working relationships.

GENERAL SAFETY DUTIES AND RESPONSIBILITIES

A. Executive Management - The President & Vice Presidents

- 1.** Responsible for safety of all employees.
- 2.** Assigns safety responsibilities and delegates authority required to implement the safety program.
- 3.** Approves safety policies as formulated by the safety officer.
- 4.** Participates in the safety program as recommended by the safety officer and committee (conducts safety tours, approves safety contracts, reviews and responds to safety reports, ensures safety awareness among key management personnel, evaluates safety programs, and reviews safety audits).

B. University Safety and Risk Management

- 1.** Develops and implements a comprehensive safety program which provides the following:
 - a.** Regular reports of facility and equipment inspection
 - b.** Investigation of employee job related accidents
 - c.** Safety and training programs for supervisors, employees, faculty and students
- 2.** Reports to the executive management on a quarterly basis concerning the status of Safety programs, concerns and problems
- 3.** Maintains accident records.
- 4.** Submits information requested by the Office of Risk Management of all losses.
- 5.** Chairs the University Safety Committee.
- 6.** Maintains current safety manual and distributes new safety information of the university.
- 7.** Conducts educational activities.
- 8.** Responsible for the overall safety program of the university.
- 9.** Has primary responsibility for coordinating the safety operations of the university.
- 10.** Checks for compliance with applicable safety laws and codes.
- 11.** Communicates with building coordinators.

C. Facilities, Management and Campus Services

- 1.** Serves as member of safety committee to ensure safe work conditions
- 2.** Executes work orders promptly.

3. Maintains a regular maintenance schedule on all equipment and keep maintenance records.
4. Makes regularly scheduled inspections and keeps records of inspection.
5. Develops and implements a boiler/machinery preventative maintenance program.

D. Department Heads/Supervisors and/or Foremen

1. Implement safety programs within assigned areas.
2. Provide new employees with job safety requirements and procedures.
3. Enforce safety rules and work regulations within assigned area of responsibility
4. Set a good example through proper attitude, discussions, and observance of safety rules and regulations.
5. Inspect work area for compliance with safe work practices and safety rules.
6. Obtain prompt first aid for the injured employees.
7. Report and investigates accidents and works with safety officer to determine cause and correct problem.
8. Ensure that only trained employees operate equipment.
9. Provide protective clothing and equipment necessary to meet regulatory requirements.

E. Instructors

1. Advise students of safety rules, regulations, and standard operating procedures.
2. Ensure good housekeeping practices and strict adherence to lab and classroom safety requirements.
3. Serve as a good role model for students under their instruction.

F. Building Coordinators

1. Coordinate fire and emergency drills with the Safety and Risk Manager.
2. Report any potentially hazardous condition in building to Facilities and/or Safety office. TMA work order system or by phone for an emergency response.
3. Insure that emergency numbers are posted on near telephones and throughout assigned building.

G. Safety Committee

1. Reviews written safety instructions and/or policies and makes recommendations for improvements.
2. Makes recommendations concerning reports summaries of incident/accident reports and other reports.
3. Promotes safety awareness to the entire campus community.

H. Employees

1. Work in accordance with accepted safety practices.

2. Report unsafe conditions and practices.
3. Observe all safety rules and regulations.
4. Make safety suggestions.
5. Attend safety meetings and safety training as required.

SAFETY RULES

- The general safety rules must be reviewed annually.
- This review will be the topic of the 1st quarter campus-wide safety meeting each calendar year through BannerWeb.
- One hundred percent participation is required in compliance with state regulations.
- Each employee attending will be documented through GSU's online monitoring system. Records of attendance will be maintained in the GSU Office of Safety and Risk Management.

The following safety rules are to be adhered to:

1. Smoking is prohibited on the campus of Grambling State University. (GSU Policy # 20200)
2. Horseplay and fighting are not tolerated in the work place.
3. Possession of unauthorized weapons and firearms, alcoholic beverages, illegal drugs, or unauthorized medically prescribed drugs will not be tolerated in the work place. Inform your immediate supervisor if you are required to take medication during work hours. Written medical evidence stating that the medication will not adversely affect your decision making or physical ability may be required.
4. Before beginning work, notify your supervisor of any permanent or temporary impairment that may reduce your ability to perform in a safe manner.
5. Use protective equipment to protect yourself from potential hazards that cannot be eliminated.
6. Do not operate equipment or machines without proper training and authorization.
7. Inspect the workstation for potential hazards and insure that it is in safe operating condition before using it.
8. If there is any doubt about the method of work to be used, consult the supervisor.
9. Follow recommended work procedures outlined for the job.
10. Return all tools and equipment to a designated place after use. Put scrap and waste material in a designated refuse container.

11. Report any smoke, fire, or unusual odors to your supervisor.
12. Use proper lifting techniques. For object exceeding 50 pounds in weight, specific methods for safe lifting must be determined by the immediate supervisor.
13. Do not throw objects or attempt to catch a falling object.
14. If your work creates a potential slip or trip hazard, correct the hazard immediately or use safety tape or “wet floor” sign to identify the area before leaving it.
15. Immediately report all incidents and accidents to a supervisor or the GSU Police Department.
16. Fasten seat belts before starting any motor vehicle.
17. Comply with all traffic signs, signals, markers, and persons designated to direct traffic.
18. Know departmental rules regarding first aid, evacuation routes, and fire department notification.
19. Jewelry, neckties, scarves, and other wearing apparel should be secured when working around equipment that may grab them.
20. Notify your supervisor of any breakage or malfunction of machinery or equipment.
21. Wear eye protection, respirators, or protective clothing in regulated areas or during functions requiring protective gear.
22. Report frayed electrical cords immediately.
23. Do not use electrical extension cords as a permanent electrical line.
24. Never turn on an electrical switch unless you know what it operates and have had the adequate training on that piece of equipment
25. Keep flammable items away from electrical outlets, cords or other electrical apparatus.

Note: Employees who do not comply with university safety rules may be subject to disciplinary action.

SAFETY MEETINGS

The purpose for safety meetings are to educate, inform, motivate, and examine work practices for potentially unsafe acts that could produce bodily injury and provide a method to preclude recurrences. Safety meetings vary from formal presentations to informal discussions of safety problems. Safety meetings are mandatory and required for all employees of each work unit. Grambling State University conducts safety meetings monthly and maintains record of each topic discussed and persons in attendance. Workers' suggestions are highly recommended for safety meetings as they have the potential for implementation of new safety policies and procedures that could reduce hazards, increase productivity, and improve work methods.

A. Safety Meetings Requirements

All employees will attend a minimum of *twelve (12) safety meetings annually*. The safety meeting objective is:

- a. Change unsafe acts and/ or unsafe conditions
- b. Provide information
- c. Introduce new materials, machines, or processes
- d. Report of past injury experiences
- e. To conduct policy orientation

Non-negotiable annual safety meetings

1. General Safety Rules
2. Bloodborne Pathogen
3. Return to Work
4. Drug Free Environment
5. Hazardous Communication

B. Safety Meeting Procedures

1. The Grambling State University Office of Safety and Risk Management develops monthly safety trainings.
2. The Information Technology Center (ITC) created a monthly safety meeting requirement notice connected to every employees BannerWeb account that informs employees to login in to the safety meeting before access is given to complete employee timesheets
 - a. ITC uploads the meetings to the intranet
 - b. Employees log in to www.gram.edu BannerWeb
 - c. Employees are automatically prompted to complete monthly training before receiving access to complete timesheet
 - d. Employee safety meeting attendance reports are generated through Argos; an Information Technology reporting software

- e. The Department of Safety and Risk Management reviews Argos monthly for safety training reports.

It is the responsibility of GSU Human Resources Department to notify GSU Safety and Risk Management of new hires that do not have computer access within the initial hiring period. If active employees are identified on the incomplete list, they are personally notified before the month ends to receive the necessary training.

C. University Safety Committee (inactive)

- a. The meetings shall be announced by the university safety committee meeting chair at least one (1) week prior to the meetings. The announcement shall be in writing to every safety committee member and conducted through Microsoft TEAMS.
- b. The University Safety Committee meeting shall include:
 - 1. Incentives to promote the safest campus environment.
 - 2. Methods of communication to increase safety and awareness.
 - 3. Best cleaning practices for classroom occupancy, living, and workspace.
 - 4. Reports of injuries since the last meeting and a discussion of accidents that occurred and safety inspections conducted.
 - 5. Discussions about how and where safety can be improved.
 - 6. Lectures, demonstrations, or visual-aid presentations on appropriate safety topics.
- c. Each safety committee representative is encouraged to conduct safety meetings with employees in his or her department. The representative should chair the meetings. The meetings should address topics that are pertinent in that area regarding safety.
- d. All safety meetings should be followed with a report in writing, listing the items discussed and action taken. Prepared minutes of these meetings shall be filed with the University Safety and Risk Management Department. These meeting records shall be kept for **one (1) year**.
- e. The University Director of Safety and Risk Management shall make recommendations or suggestions to the Executive Staff about actions that are warranted from a safety aspect.

D. Special Safety Committee (Return to Campus Task Force)

The University has established a “special” Safety Committee (Return to Campus Task Force) to hold **weekly meetings** to facilitate communication of safety ideas and address problems surrounding the transition of campus life after Covid-19.

The committee's purpose is to educate, establish safety guidelines to mitigate risk during daily activities and special events. The committee coordinates with various divisions on health and safety concerns and overall management. Current committee members:

VP of Compliance
VP of Finance
VP of Student Affairs
Chief of Police
Director of Facilities Management
Director of Student Health Services
Director of Human Resources
Director of Safety and Risk Management
Director of Housing
Director of Communications
Safety and Risk Manager

NEW EMPLOYEE TRAINING

The Louisiana State Office of Risk Management has directed all agencies to develop general safety rules and policies which apply to all employees and departments task, and specific rules which apply to a particular department.

GSU is required to have a documented review of written policies with employees and conduct documented awareness on the following topics. Such awareness shall be completed within 90 days of hire and additionally as indicated thereafter, and may count toward the monthly/quarterly safety meeting requirements.

- Drug-Free Workplace (once every 5 years)

<https://www.gram.edu/faculty/policies/docs/53014%20-%20Drug%20Free%20Workplace%20Act.pdf>

- Return to Work (once every 5 years) –

<https://www.gram.edu/faculty/policies/docs/53038Transitional%20Return%20to%20Work%20Plicy.pdf>

An Agency's drug-free workplace policy/awareness program should be in accordance with RS 49:1001 et seq. and any other relevant statute. Agencies are encouraged to continue awareness and/or training on

- Violence in the Workplace

<https://www.gram.edu/faculty/policies/docs/53042%20-%20Violence%20in%20the%20Workplace.pdf>

- Sexual Harassment

<https://gsunet.gram.edu/eo/sexharrassment.php>

- Code of Governmental Ethics

<https://www.gram.edu/faculty/policies/docs/53013%20-%20Employee%20Code%20of%20Conduct.pdf>

EMPLOYEE SAFETY TRAINING

Employee safety trainings address topics that are specific to employees in a particular department or perform a specific task. Each department should ensure that new hires receive appropriate training to perform the functions of their role.

GSU Supervisors or trained staff must provide for new staff

1. instruction in correct work procedures
2. use of safety equipment
3. availability of assistance

Training should be documented with signatures and date of training, or electronic acknowledgement.

Supervisors have five (5) basic responsibilities:

1. To establish work methods
2. To give job instructions
3. To assign people to jobs
4. To supervise people at work
5. To maintain equipment and the work place

Where supervisors perform these basic responsibilities properly, the result is a safer work environment. New supervisors must also be made aware of their specific safety responsibilities including conducting safety meetings, inspecting the work area, investigating accidents, planning safe work methods, training employees in safe work methods, analyzing jobs for safety, and demonstrating leadership skills in safety.

SAFETY TRAINING PROCEDURES

1. Identify the employees that need to be trained
2. Select the training Topics

[11 Training Safety Topics](#) are recommended as essential to each Agency or facility

Click on the link to view page 29-30 of the Louisiana Office of Risk Management Loss Prevention Manual. <https://www.doa.la.gov/media/gicmc4qe/2022-general-safety-program.pdf>

3. Develop Training Objectives (Lesson Plan)
 - a. Title: Clearly identifies the topic
 - b. Objectives: States what the trainee should know or be able to do at the end of the training period. A well-written objective limits the subject matter, is specific, and stimulates thinking on the subject.
 - c. Estimated Time of Instruction: States the length of the training session. Ample time should be allowed to thoroughly cover the subject.
 - d. Materials: States material to be used in training including equipment, tools, charts, slides, films, videos, etc.
 - e. What the Instructor Will Do: Gives the plan of action. Indicates the method of teaching (lecture, demonstration, class discussion, etc.). Provides directions for instructor (show chart, write key words on chalkboard, etc.).
 - f. What the Employee Will Do: Indicates how employees will apply the material in the training session.
 - g. Evaluation: Establishes an assessment method (test, discussion, demonstration) for determining whether the training objectives are achieved.
 - h. Assignment: Provides employees an opportunity to apply the material on the job.

ALL TRAINING MUST BE DOCUMENTED:

1. Name and signature of each attendee
2. Date of Training, Topic(s) Discussed
3. Instructors Name
4. Teaching Aids used

5. number of employees requiring the training
6. number of these employees actually in attendance
7. suggestions/follow up

The Office of Risk Management requires 100% participation by the “target audience”, so the instructor must provide “make up” sessions for those, not in attendance.

Copies of this documentation must be kept for a minimum of 3 years in the respective Department and are subject to inspection at any time.

RECORD KEEPING

The following safety records should be kept for at least one (1) years, or for varying periods as noted below. Copies of forms are included with exhibits describing the specific procedures as noted.

1. Inspection Reports: Completed monthly or quarterly in each work unit following a general safety inspection. The completed inspection is retained in the GSU Office of Safety and Risk Management. These reports are readily available to the agency head and at the time of the university audit.
2. Hazard Control Log: Facilities Management and Campus Services work order system is used in lieu of placing the log in the various work centers. The GSU Office of Safety and Risk Management will forward any item that is not corrected in 30 days to the ORM Loss Prevention as required by the Loss Prevention Manual.
3. Employer’s Report of Occupational Injury/Illness: Completed for each accident requiring medical treatment. These reports are filed by year of occurrence in the GSU Office of Human Resources Worker’s Compensation office.
4. Incident/Accident Investigation Report: Completed for each accident or near miss. Attached to the Employer’s Report of Occupational Injury/ Illness, when an injury has resulted. The supervisor retains the original. Copies are sent to the department head and the GSU Office of Safety and Risk Management.
5. Job Safety Analysis: Completed by supervisors in each work units. Supervisors are expected to perform at least one job safety analysis each month. Job safety analysis forms are kept in a file in the originating area. The documents should be readily accessible to employees and there should be an index naming the task and date the job safety analysis was completed or revised.
6. Safety Meeting Record: Records of monthly safety meetings are maintained in Argos. Argos is an IT system that documents each meeting by month and compiles attendance records. The GSU Office of Safety and Risk Management reviews these records monthly to determine employee attendance status.
7. Training Documentation: Signed documentation of training completed by each employee following training sessions is maintained in the operating area for five years. Training conducted by the GSU Office of Safety and Risk Management are filed by training and year within the Safety and Risk Management department.

SAFETY INSPECTIONS

The safety inspection program includes general housekeeping safety, rules and procedures for conducting safety inspections. Safety inspections shall be conducted on a regular basis by building coordinators even if a problem has not been reported. If hazards exist, corrections should be made immediately.

Mandatory safety inspections shall be conducted on a monthly or quarterly basis. University personnel conducting these inspections shall utilize the safety inspection checklist appropriate to their respective areas. A completed checklist shall be made for each safety inspection and shall be sent directly to the GSU Safety and Risk Manager within seven (7) days of the completed inspection. These inspections should be conducted by the 15th day each month or by the 15th day of the second month of each quarter. Monthly or quarterly inspections are based on the university's compliance status.

The GSU Safety and risk Manager shall conduct scheduled and unscheduled safety standards and regulations. All University facilities – building and grounds – are subject to safety inspections.

Area Inspections

All employees are responsible for reporting any potentially hazardous conditions or practice they find. University employees will utilize the Facilities Management and Campus Services work order system (TMA System) to report hazards or unsafe conditions. If the hazard cannot be corrected in 30 days, the GSU Safety and Risk Management Manager must report it to the Office of Risk Management-Loss Prevention on a Hazard Control Log (Form HC-1-90).

Inspection checklist

The inspection checklist is used as a guide to ensure that critical items are not overlooked for compliance and safety.

Fire Safety and Emergency Equipment

- Fire extinguishers
 - Visible and accessible
 - Inspection tags in place (less than a year old)
- Fire alarm system
 - Tested within the past year
- Sprinkler heads
 - 18” clearance
- Smoke alarms
 - Push button tested
- Exits
 - Visible signs
 - Illuminated (if battery operated, push button tested)
 - Routes to exit are clear
- Evacuation plans
 - posted
- Fire/evacuation drills
 - annually
- Portable heaters-
 - automatic shut off
 - use away from flammable materials
- Emergency phone numbers
 - posted

- Emergency lights
 - Functioning (push button test)
- First Aid Kits
 - Visible and accessible
- Blood Borne Pathogen Spill Kits
 - Stocked and accessible

Building and Office Safety

- Slip, trip, and fall hazards identified
- Service holes, man holes, drains
 - Properly covered
- Well lit
- Ceiling, Doors, Flooring, Stairways, Windows
 - No missing ceiling tiles
 - Doors and windows are secure and lock
 - No loose or broken flooring or windows
 - Secure handrails
- Housekeeping
 - floors and workplaces free from unnecessary clutter
- Plumbing
- Security system
- Maintenance and mechanical areas
- Safety Rules
- Hazard Control Log

Unoccupied instructional, living, and working spaces: *Should be inspected according to the schedule listed below as a preventative maintenance measure to avoid environmental and safety issues that would normally be identified by occupancy.*

- Residential/Housing: **biweekly**
- Office: **monthly**
- Classrooms: **monthly**

If during the inspections of unoccupied spaces a need for maintenance service is identified, work orders should be immediately submitted through the GSU university work order system (TMA System). See work orders on how to submit request.

Electrical Safety and Storage

- Machines
 - Power transmission guarded, point of operation guarded.
- Atmospheric conditions
 - Clean from dust, gases, spray, fumes, illumination.
- Containers
 - scrap bins, disposal receptacles, carboys, barrels, gas cylinders, solvent, cans, etc.
- Electrical equipment
 - Working switches, outlets, cables, grounds, connectors, and connections
- Hand tools
 - Accessible and working wrenches, screwdrivers, hammers, and power tools
- Hazardous supplies and materials
 - Identified and properly stored explosives, flammables, acids, caustics, and toxic chemicals; biohazards, radiologic hazards.

WORK ORDERS

Work orders should be submitted anytime a maintenance service is required.

To submit

- Go to GSU Home page: www.gram.edu
- At the upper right corner click on: "Select a Site"
- Scroll down to select Facilities then click
 - "Go"
- Scroll down to resources and select
 - "Submit a work order request"
- This link will lead you to the TMA system
- In TMA systems select
 - "Submit a Work Order" on the top left corner of the page
- Complete the form with required criteria listed below:
 - Facility
 - Building
 - Floor or Area
 - Name
 - Number
 - Email Address
 - Repair Center
 - Request

A work order is required for ALL work to be performed please do not attempt to bypass this process.

INCIDENT/ACCIDENT INVESTIGATIONS

An **accident** is defined as an unintentional event that results in personal injury and or property damage. These events can occur involving on campus involving employees, clients, visitors, students, and or property.

An **incident** is also referred to as "Near Misses". These are events that had the potential to cause injury and/or property damage involving employees, clients, visitors, students, and or property.

Safety must be first and every employees, clients, visitors, students should be purposeful in preventing an accident from happening in the first place.

Measures to prevent accidents are

- University wide safety training
- Appropriate signage identifying potential hazards
- The GSU University Communication/ notification call outs/texts
- Prompt attention/repairs to reported safety issues

Reportable Accidents

When an accident occurs, medical aid should be requested immediately for the injured person. All accidents, including those to non-employees, will be investigated. "Near misses" should be investigated as thoroughly as an accident that results in personal injury or property damage.

In all cases- If medical attention is needed notify the University Police at 2222. If an ambulance is needed call 911 or 9-911 from a GSU campus line.

Be prepared to tell the 911 system or University Police the following: (a) Nature of the emergency; (b) Exact location of the victim; (c) Your name and address. **Do not hang up until advised that it is all right to do so.**

Employee Instructions

1. Request medical care if needed.
2. Report the accident/incident to their immediate supervisor as soon as practical, at least before the end of the shift during which the accident occurred.

Supervisor Instructions

1. Supervisor reports the accident/incident on the State Employee Incident/ Accident Form (**DA 2000**). All spaces on the DA-2000 are to be completed. Notations such as N/A should be avoided.
 - a. Thoroughly complete the “Root Cause Analysis” section of the form.
 - i. provide a comprehensive explanation of the unsafe act which contributed to the accident or unsafe condition,
 - ii. provide a comprehensive explanation of why conditions and any other contributory factors existed which contributed to the act,
 - iii. provide a detailed explanation of what immediate and long range actions the supervisor took to prevent a recurrence of the of the accident and if any assistance or resources are needed to prevent recurrence. The GSU Office of Safety and Risk Management is available to assist supervisors in completing this forms and, once completed,
2. The initiated accident/incident form (DA 2000) is submitted to the GSU Office of Safety and Risk Management within 24 hours to complete the investigation. *It is important to meet this guideline to allow for the most accurate and thorough investigation of the conditions and location.
3. If the injuries require medical attention, the employee’s supervisor must **ALSO** complete the LDOL-LOC-1007- “Employer’s Report of Occupational Injury or Disease Form”.

Clients/Non-employee (students)/Visitors Instructions

1. Request medical care if needed.
2. Immediately report the accident/incident to GSU Police Department.
189 Central Ave, Grambling LA.
(318) 274-2222

University Police Instructions

1. Complete the DA-3000- Visitor/Client Accident Reporting.
2. University Police are to retain the original and are to send a copy of the completed DA-3000 to the GSU Director, Office of Safety and Risk Management within 5 working days after completing the form.

Accident/Incident Investigators

An investigation is for the purpose of collecting factual accounts of an accident. Investigations can determine cause, eliminate blame, and prevent recurrence.

All levels of administrators and supervisors investigate accidents. The most important investigator is the first-line supervisor OR THE University policeman who first arrives at the scene of the accident because:

- Knows most about the situation.
- Has a personal interest in identifying accident causes.
- Can communicate more effectively with the workers.
- Can take immediate action to prevent an accident from recurring.

What, When, and Why of Accident Investigation

STEPS TO CONDUCT AN INVESTIGATION

STEP 1. Explain to the employee/client/visitor that your only interest is to prevent recurrence.

STEP 2. Express concerned for him/her.

STEP 3. If possible, conduct the interview at the scene of the accident–this reduces the possibility of mistakes and avoids embarrassment.

STEP 4. Ask the person to state clearly their version of the accident. Do not make judgmental remarks.

STEP 5. Ask any questions necessary–the key word is necessary. Limit your questions, as much as possible, to facts.

STEP 6. Repeat the person’s version of the event as you understand it. It assures complete understanding between yourself and the employee as to what actually took place.

STEP 7. Close the interview on a positive note.

Vehicle Accidents

1. **Vehicle accidents involving state-owned vehicles or rented/leased vehicles being used on State business in which there are no injuries to the employee**
 - must be reported on Form DA-2041- “Accident Report- Louisiana State Driver Safety Program”.
2. **Vehicle accidents involving state-owned vehicles or rented/leased vehicles being used on State business in which there injuries to the employee**
 - must be reported on Form DA-2041- “Accident Report- Louisiana State Driver Safety Program”.

*If the injuries require medical attention, the employee’s supervisor must **ALSO** complete the LDOL-LOC-1007- “Employer’s Report of Occupational Injury or Disease Form”.

JOB SAFETY ANALYSIS

Job Safety Analysis (JSA) is a component of incident/accident investigation. Incident/accident analysis and safety training is one of the first steps because a hazard must be recognized before it can be eliminated.

PURPOSE: JSA is hazard prevention. Hazards may develop after work procedures are designed, or may be the result of a change in the work procedure or personnel.

RESPONSIBILITY:

It is the responsibility of the Department Directors and Supervisors to ensure that JSAs are implemented properly.

Trained and Skilled Employees

1. train new employees
2. provide continuous training to reduce risk

Supervisors

1. use JSAs as performance evaluation tools

2. use JSAs as accident investigation tools

Three objectives in job safety analysis:

- 1) To systematically evaluate jobs and work methods to eliminate hazards and potential hazards;
- 2) To develop a tool to assist in the teaching of safe work procedures, and
- 3) To provide a framework for incident/accident analysis.

JSA PROCEDURES

The job safety analysis is an incident/accident investigation tool. When incident/accidents occur involving a job for which an analysis has been performed, the analysis should be reviewed to determine if proper procedures were followed or if the procedures should be revised.

Log in: <https://www.gram.edu/>

Click on: <https://www.gsunset.gram.edu/>

Click on: Safety and Risk Management

Click on: (Located under Documents) Job Safety Analysis

Perform a JSA on all tasks that have resulted in a trend, death, or a change in job procedures or equipment.

RETURN TO WORK

Policy # 53038 (See University Policies and Procedures)

To ensure the safe and expedient return of Grambling State University employees with job related injuries and illnesses to transitional or regular employment, and to comply with R. S. 39:1547, which requires creation of a return to work program.

Log in: <https://gram.edu/>

Click on: <https://gsunset.gram.edu/>

Click on: University documents and forms

Click on: University policies and procedures

BLOOD BORNE PATHOGEN- Exposure Control Plan

See GSU Safety and Risk Management Blood Borne Pathogens Exposure Control Plan

The exposure control plan is designed to minimize occupational exposure by identifying potentially exposed employees, routinely employing “Universal Precautions”, and instituting engineering and work practice controls. The plan explains to all employees, Grambling State University’s program for providing personal protective equipment and clothing, training, Hepatitis B vaccination, post exposure evaluation and follow-up, sign and label programs, and other provisions for those who may be exposed.

The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures, which affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

Log in: <https://www.gram.edu/>

Click on: <https://www.gsunset.gram.edu/>

Click on: Safety and Risk Management

Click on: (Located under Documents) Blood Borne Pathogens Exposure Control Plan

FIRST AID

First Aid is immediate care given to a person who has been injured or who has suddenly become ill. When properly administered, first aid can mean the difference between life and death, between a temporary and a permanent disability or between rapid recovery and long hospitalization.

PURPOSE: to make employees aware of first aid procedures. It is not a complete first aid guide. First aid attendants should refer to Red Cross first aid guides and other sources of current information for administering procedures as CPR.

Emergency Numbers:

GSU Police Department.
189 Central Ave, Grambling LA.
(318) 274-2222

NOTE: ALL INJURIES TO EMPLOYEES MUST BE REPORTED ON A DA-2000; INJURIES TO NON-EMPLOYEES MUST BE REPORTED ON A DA-3000. (SEE ACCIDENT/INCIDENT REPORT SECTION OF THIS PLAN).

First Aid Log: no longer required

First Aid Kit and Inventory: A first aid supply kit are located in every building. Monthly building inspections will include the check of first aid kits for restocking.

FIRST AID PROCEDURES

Serious injury or illness occurs on campus: immediately dial X9-911 or 911 from mobile phone

1. Give your name
2. Describe the nature and severity of the medical problem
3. provide the campus location of the victim

Minor injury or illness employees should report to their supervisor to be referred for non-emergency first aid treatment.*

In case of serious injury or illness trained personnel* should quickly perform the following steps:

1. Keep the victim still and comfortable. DO NOT MOVE THE VICTIM.
2. Ask victim, "Are you okay?" and "What is wrong?"
3. Check breathing and give artificial respiration if necessary.
4. Control serious bleeding by direct pressure on the wound.
5. Continue to assist the victim until help arrives.
6. Look for emergency medical I.D., question witness(es) and give all information to the paramedics.

***Only persons certified in first aid or with advanced medical treatment shall provide first aid to individuals.**

EMERGENCY PREPAREDNESS

Grambling State University strives to provide a safe and healthy campus environment for students, employees, vendors, and visitors. The university seeks to be proactive in implementing processes to prevent threats and/or actual incidents of emergencies and crises and to mitigate the consequences of such incidents should they occur.

It is essential that all staff and faculty members are familiar with potential emergencies and know how to implement this plan in the event one should occur. This plan will serve as a reference for University personnel.

PURPOSE

The Emergency Management Program or Plan provides procedures for the management function and organizational structure for response to emergencies that are of a magnitude to cause a significant disruption of the functioning of all or portions of the university. This plan describes the roles and responsibilities of departments, schools, units and personnel during emergencies. The basic emergency procedures objective is to protect lives and property through effective use of university and community resources.

Since an emergency may be sudden and without warning, these procedures are designed to be flexible in order to accommodate contingencies of various types and magnitudes.

Grambling State University understands that disasters may happen at any time. The key to a successful recovery is planning ahead and taking the necessary steps to prevent and minimize risk.

The purpose of the Emergency Preparedness Program is to ensure that all GSU employees are aware of the developed and implemented plan for the safe evacuation of all persons in the affected area and the rapid control of hazards during life threatening situations. A copy of GSU's [Emergency Response Plan](#) (Emergency Response Manual) is available on the gram.edu.net webpage.

MISSION

The university will respond to an emergency in a safe, effective and timely manner. University personnel and equipment will be utilized to accomplish the following priorities:

- Priority 1: Life Safety
- Priority 2: Incident Stabilization
- Priority 3: Property Conservation

ASSUMPTIONS

The University Emergency Contingency Plan is constructed on a realistic approach to the problems likely to be encountered on a campus during a major emergency or disaster.

Hence, the following are general assumptions

- A. An emergency or a disaster may occur at any time of the day or night, weekend or holiday, with little or no warning.
- B. The succession of events in an emergency are not predictable, hence, published support and operational plans will serve only as a guide and checklist, and may require field modification in order to meet the requirements of the emergency.

- C. Disasters may affect residents in the geographical location of the University: therefore, city, parish and federal emergency services may not be available. A delay in off campus emergency services may be expected (up to 48-72 hours).
- D. A major emergency may be declared if information indicates that such a condition is developing or is a probable.

Grambling State University must be prepared to effectively cope with the unique problems that arise in an emergency. Preparedness is critical to protect employees, citizens, clients, students and property against all natural disasters and other incidents such as

- Fires
- bomb threats
- sabotage
- civil disorder

Effective planning for emergency situations can minimize the interruption of operations by providing a logical course of action during the emergency.

Emergency preparedness requires a system for the prompt recognition of a serious situation;

- the availability of a well-publicized, flexible, and tested plan;
- and clear delineation of the responsibilities of employees.

OPERATIONAL CONTROL

The direct operational control of the campus major emergency or disaster is the sole responsibility of the:

- University Emergency Coordinators
- Chief of University Police
- Senior Associate Vice President for Campus Operations or their designee

The coordination of campus emergency resource teams and all emergency operations for Campus Operations or a delegated alternate is the responsibility of the

- Chief of University Police
- Senior Associate Vice President for Campus Operations

GSU stresses the importance of being prepared in emergencies. Instruction for emergencies should be posted in each facility and office. Emergency procedures should be established, implemented, and monitored by a local office emergency preparedness coordinator.

EMERGENCY PHONE NUMBERS	
University Police Department	274-2222
Foster-Johnson Health Center	274-2638
Facilities Management & Campus Services	274-6162
University Safety and Risk Management	274-3174
City of Grambling Police Department	274-3771
Ruston Police Department	274-4141
Lincoln Parish Sheriff's Department	251-5151
State Police	(318) 345-0000
Local Ambulance Service	255-3301
Lincoln General Hospital	255-5780
<i>Note: Emergency 911 cannot be accessed from the University's telephone system Call 9-911.</i>	

HAZARD COMMUNICATION PROGRAM

GENERAL POLICY

Grambling State University is committed to providing a safe and healthy work environment for employees. The Grambling State University Hazard Communication Program has been established to improve communication and training associated with hazardous substances. The program is designed to maintain a healthy work environment by increasing employee awareness of hazardous substances used in the workplace. These substances include, but are not limited to, chemicals, paints, inks, glues, cleaning agents, and compressed gases.

PURPOSE

The purpose of the hazard control program is to manage the handling and disposal of hazardous materials and ensure that Grambling State University conducts this management in strict compliance with regulation prescribed by Louisiana's DEQ and U.S. Environmental Protection Agency (EPA).

- Civil penalty can be assessed for each day of continued noncompliance with hazardous waste regulations.
- Criminal penalties can result in fines for each day of violation and a prison sentence imposed for knowingly falsifying a label, manifest, record or report; or transport waste to a facility that does not have a permit; or treats, stores or disposes of hazardous waste without a permit.

The University has established a program for controlling all hazardous materials used by or housed in any facility of the University.

Employee rights

Hazardous substances in the workplace, in some forms and concentrations, pose potential acute and chronic health hazards to employees who are exposed to these substances. Departments and employees have a right and a need to know the properties and potential hazards of substances to which they may be exposed. Such knowledge is essential in reducing the incidence and cost of occupational disease.

1. Employees who use or may be exposed to potentially hazardous substances or harmful physical agents shall be informed about the hazards of those substances or physical agents and
2. shall be trained in the precautions to take to prevent exposure and what to do if they are accidentally exposed.
3. No employee shall engage in or be required to perform any task, which is determined to be unsafe or reasonably hazardous.

Responsibilities

SAFETY and RISK MANAGEMENT OFFICE

- Develop, implement, and monitor the Hazard Communication Program.
- Assist departments in complying with program requirements including labeling, Safety Data Sheets (SDS), employee information and training, and record keeping.
- Provide the department with copies of SDS for hazardous materials they have ordered through the Purchasing Department.
- Outside contractors working at the university shall be provided information regarding hazards that they may encounter during their work at the university.

DEPARTMENTS

- Department Chairs and Directors are responsible for providing the resources to effectively implement this program throughout their department(s), and for establishing systems to ensure departmental compliance
- Develop Standard Operating Procedures for Labs that are clear useful to lab personnel for training and safety purposes.
- Ensure that all requirements of the Hazard Communication Program have been met before employees are exposed to hazardous substances under normal conditions of use or in a foreseeable emergency.
- Maintain master file of SDS in each department.
- Develop and maintain an inventory of hazardous substances present in all work areas within the department.
- When ordering suspected hazardous substances through the Purchasing department via the electronic vendor database, an SDS is requested where one is not currently present in the department.
- Maintain a file of SDS' in a location readily accessible to department employees.

PURCHASING AND SUPPORT SERVICES

- Forward any SDS received to the GSU Office of Risk Management, noting requesting department's name on the SDS sheet.

EMPLOYEE

- Employees must first use common sense and good judgment at all times as potential hazards may exist or be created in the work environment, because no single set of safety procedures can guarantee accident free employment or place of employment.
- Each employee assigned to work with a hazardous substance shall read and comply with all hazard communication procedures, whether written or oral, before performing assigned duties.

Minimum Safety Standards

The minimum safety standards are listed in detail:

Log in: <https://www.gram.edu/>

Click on: <https://www.gsunet.gram.edu/>

Click on: Safety and Risk Management

Click on: (Located under Documents) Hazardous Communication

Definitions

A hazardous chemical is one that poses a danger to human health or to the environment, if improperly handled. The EPA has divided hazardous chemicals into several categories, including:

Ignitable Materials- These materials give off heat, smoke, soot, and may disperse toxic pollutants and by-products into the air. Such materials have a flash point below 60 degrees C (140 degrees F). For example, gasoline.

Reactive Chemicals- These materials can explode or produce poisonous gases when exposed to light, air, water, etc., such as oxidizers and sulfides.

Toxic Chemicals- These materials can cause serious illness or death when inhaled, ingested or absorbed through the skin. The EPA definition of a toxic chemical is a materials that possesses an

LD50 RAT (orally)< MG/KG, and LD50 RAT (inhalation)<200 PPM, or an LD50 RABBIT (dermally)<200 MG/KG.

Corrosive Chemicals- The materials can cause injury to the skin or body, or destroy their own containers or other materials and can be released into the environment. For example, sodium hydroxide.

Listed Waste- Materials regulated by U.S. EPA as hazardous waste.

Laboratory/Chemical Safety in Workplace

Everyone must be cooperative and take responsibility for safety in the lab. Failure to follow regulations, could lead to disciplinary action under the university's disciplinary rules as well as State and Federal regulations. Every university department with chemical laboratories or using chemicals must establish a chemical safety committee or appoint someone to be responsible for the safety program within that department.

It is the responsibility of immediate supervisors and department heads to insure employees working within their department are fully informed with regard to the procedures for safe handling and use of hazardous chemicals.

Storage of Hazardous Chemicals

Prior to storing a chemical, it must be properly labeled with permanent pressure sensitive label and information must be legible and either typewritten or in indelible ink. The label should include the following:

- a. The chemical name of the material
- b. The date received or produced
- c. Hazardous properties such as whether flammable, toxic, etc.

Note: Storage of food in refrigerators intended for laboratory use, including storage of chemicals, flammable materials, etc., must never be used for the storage of food by laboratory employees.

Disposal of Hazardous Chemicals

- a. The disposal of hazardous chemicals is strictly regulated under U.S. EPA and Louisiana's DEQ.
- b. No hazardous chemical substance shall be disposed of into the sanitary sewage system, into the air, or into the university's normal trash system. Containers of chemical waste will be removed by the designated university representative and only when the containers are properly labeled.
- c. The disposal containers should be clean, nonreactive, sealed, and labeled:
 - a. Waste
 - b. Chemical name or names
 - c. Responsible person/department

- d. Date container was filled, and
 - e. Appropriate hazard warnings
- d. Incompatible wastes shall not be placed or mixed in the same container.
 - e. Departments with unknown chemicals for disposal shall assume the financial responsibility for the costs of the analysis to determine the identity or composition of the material.

Chemical Spills

- a. Minor spills should be cleaned up immediately by laboratory personnel, using proper procedures for the chemicals involved, and providing the material is not dangerous to life and health.
- b. For moderate to large spills of dangerous materials, e.g. acid, etc., evacuate the building by going room to room or by the building alarm system. Call Campus Police to report the incident and request Campus Police to notify the appropriate Local and State Agencies.
- c. Incidents involving fire(s) of any size, but the smallest size where you are sure you can put out the fire without spreading the fire or causing injury to yourself, call Campus Police, 274-2222, to report the fire. The building should be evacuated.

Spills on Clothing

- a. All contaminated clothing must be removed immediately and the skin should be washed with soap and cool water. Flush the skin with cool water for no less than fifteen (15) minutes. The University's Hazardous Material Director/Safety Director and/or Local or State Hazardous Material Agency should be consulted before contaminated clothing is reused, laundered or discarded.

Responsibilities

- a. Users (generators) will be responsible for the proper storage, control, use, and disposal of all hazardous chemical waste they may use or generate.
- b. Deans, Directors, Chairpersons and appropriate Vice Presidents shall determine that all hazardous chemical wastes generated in their areas are to be disposed of according to Federal and State Law as well as University Policy.
- c. The transportation of hazardous materials in personal vehicles is prohibited. The university will not take responsibility for persons who carry hazardous materials in vehicles not owned or operated by the university.
- d. The supervisor of each operating unit will:
 - 1. Make an exhaustive search of his area to ensure all hazardous materials are reported. If any unidentified substance or material is discovered during this inventory, the University Safety Officer should be contacted

for assistance in identifying and material for handling and disposition instructions.

2. Ensure all hazardous materials are properly labeled.
3. Inventory and maintain an up-to-date list of all hazardous materials in his/her area of responsibility
4. Identify the types and amounts of hazardous material on hand is required for the intended purpose of operation.
5. Provide safety instructions to employees/students covering proper handling, health considerations, storage, emergency response and disposition of hazardous materials
6. Ensure appropriate MSDS information is readily available to personnel in the area where hazardous material is used/stored.

e. The University Safety Officer will:

1. Maintain a complete list of all hazardous materials on campus by location
2. Provide overall direction to the Campus Safety Committee in administering the Hazardous Materials Management Program at the University
3. Conduct unscheduled inspections to ensure hazardous materials are used/stored in accordance with prescribed safety regulations

e. Record Keeping

Safety Data Sheets shall be maintained on all hazardous or toxic materials used at the University and will include as a minimum the following:

1. The chemical and/or common name of substance
2. The known acute and chronic health risks
3. The way(s) it enters the body and symptoms that appear when exposed to it,
4. The chemical and physical characteristics of the material,
5. The necessary precautions, handling practices, protective equipment and other safety procedures used to limit potential exposure to the materials,
6. The emergency treatment when exposed to materials
7. The emergency procedures for spill, fire and disposal and
8. The known potential health risks posed by the material.

A. Emergency Notification

Who to Contact and What to Do in Case of a Chemical Emergency

1. Chemical Spills.: Call Safety Officer – Ext. 274-3174
After hours, call University Police Ext. 2222.
2. Chemical Fire: Call University Police – Ext. 2222
3. Chemical Ingestion/Contact: Go to Foster-Johnson Infirmary-Seek medical aid.
After hours call University Police – Ext. 2222

B. Definition

Hazardous Chemical- Any chemical or material that has the potential to be harmful to humans or the environment shall be considered hazardous. Examples: toxic, flammable, reactive, corrosive materials.

Call 274-3174 for more detailed information.

C. Responsibilities

The purpose of the safety program is to prevent injury to personnel and loss or damage to property. This is achieved by the planning of all work based on your understanding of the hazards involved and utilization of safe working procedures.

This manual of safety in chemical research is based on the premise that the responsibility for safety follows line organizations as presented below.

1. Department Head and Faculty:

This person (s) has the responsibility for safety pertinent to the personnel and facilities under his/her supervision. The department head and faculty will make sure:

- a. personnel under his/her supervision are familiar with safe work practices
- b. personnel are informed of the hazards of the chemicals in their work area
- c. training and supervision are given so that personnel have knowledge and experience to handle chemicals safely.
- d. chemical safety guidelines are developed for laboratories under his/her direction

2. Individual Personnel/Staff:

- a. shall follow prescribed safety guidelines
- b. shall report to supervisor any hazards as they appear
- c. shall report to supervisor any accident or change in health status if it is due to a job-related chemical exposure.

3. Safety Officer/Committee:

- a. conducts annual lab safety inspections

- b. conducts semi-annual checks of chemical fume hoods.
- c. maintains safety data sheets on all hazardous chemicals used at the university and provides this information to any employee or student upon request (Department Safety Officer)
- d. Provides technical assistance for the collection and disposal of hazardous chemical waste

D. Right-To-Know

Each individual has the right to know about potentially hazardous chemicals in the work environment. Every chemical should be considered equally dangerous until the properties of that agent or chemical is known. The following are sources available to you to help in the education process:

1. **Safety Data Sheets:** Each Department that maintains chemicals will keep current Safety Data Sheet (SDS) on file for all chemicals used by that Department. These SDS are available for review by any student or employee.
2. **Chemical Labeling:** Refer to the manufacturer's label on the container for information regarding the hazardous properties of the chemical.
3. **Training:** Each department that maintains chemicals will provide training for all employees as required by the Right-To-Know Law to include the following:
 - a. How to use Safety Data Sheets (SDS)
 - b. Explanation of the labeling system
 - c. General training on the hazards associated with flammable, corrosive and toxic chemicals
 - d. Review of hazardous chemical waste manual

Each DEPARTMENT will ensure that all employees and students, working with hazardous chemicals are trained. This training will be documented and for maintained by the department.

E. Rules for Handling Chemicals

The following general guidelines are to be used when handling any chemicals. All laboratory personnel are expected to know these general rules, plus any other rules that apply to the specific chemical that is being used.

1. **Personal Safety**
 - a. Allow only authorized personnel in the laboratory. Avoid all distractions. Make sure that someone knows that you are conducting an experiment using hazardous chemicals and what to do in case of an emergency.
 - b. When in the laboratory, do not:
 1. Store food in refrigerators designated for chemical storage
 2. Eat

3. Drink
4. Chew tobacco
5. Chew gum
6. Smoke
7. Apply cosmetics

2. Proper Clothing

- a. Wear a lab coat or safety apron at all times during experimental procedures.
- b. Wear chemical resistant eyewear when working with chemicals.
- c. Do not wear contact lenses in the laboratory.
- d. Do not wear sandals or open-toed shoes when handling chemical solutions.
- d. Confine long hair when working around mechanical equipment or ignition sources.
- e. Wear the proper type of gloves when working with chemicals that can be absorbed by the skin.
- f. Always wear appropriate (issued) radioactive monitoring devices when working with radioactive materials.
- h. Work in a fume hood when working with volatile chemicals.

3. Contact with Chemicals

- a. Use mechanical pipetting aids for all pipetting procedures (Do not pipette anything by mouth).
- b. In the event of contact:
 1. Flush the skin or eyes with water and remove any contaminated clothing.
 2. Report to hospital if eye contact or serious skin contact with chemicals occur.
 3. Clean up any small chemical spills immediately and properly dispose of the waste materials

4. Important Precautions: Always:

- a. Locate and be familiar with the proper use of emergency showers, fire extinguishers, blankets, and eye wash fountains.

- b. Conduct always work with hazardous chemicals under in a properly functioning chemical fume hood.
- c. Read labels on chemical bottles before using them
- d. Consider any unlabeled chemical solution hazardous until it is identified and disposed of in the proper manner.
- e. Discard any chemicals that have changed in color or appearance
- f. Remember, when diluting acids, add strong to weak.
- g. Assemble apparatus so the control valves and switches will remain accessible should a fire occur
- h. Use approved cabinets for storing of chemicals.
- i. Observe and comply with all safety and warning labels or signs
- j. Store heavy pieces of glassware on lower shelves, and light pieces on upper shelves. Store tall pieces at the back and smaller ones toward the front of the shelf.
- k. Use electrical equipment with grounded plugs (3-pronged)
- l. Use explosion-proof electrical equipment in working with flammable chemicals
- m. Maintain good housekeeping throughout the laboratory
- n. Keep aisles free of obstructions
- o. Keep laboratory sink, work benches, etc., clean
- p. Store flammable liquids in an appropriated explosion-proof refrigerator

Never:

- a. Work alone in the laboratory when conducting test involving hazardous chemicals
- b. Inhale chemical vapor directly; if it is absolutely necessary to smell a chemical, wave your hand over container opening
- c. Leave experiments running unattended.
- d. Use flammables around sources of ignition
- e. Pick up a piece of equipment that is suspected of being hot with your bare hands.
- f. Use chipped or broken glassware

- g. Use a towel to clean up broken glass
- h. Store glassware higher than a person can reach
- i. Use frayed or damaged extension cords

F. Ordering and Storing Chemicals

The quantities, types, and storage of chemicals are major issues to be considered in laboratory safety. A few basic rules will greatly reduce risks in the laboratory.

Note: Always insure MSDS is included with each order of chemicals.

1. Guidelines for Ordering:

Always order small amounts of the needed chemicals – a six month supply is plenty. Check your inventory regularly and dispose of outdated or unnecessary chemicals. Avoid a stockpile of unused chemicals.

Grambling State University is a small quantity waste generator. Excessive ordering can result in university noncompliance.

Consider ordering solvents in safety tins rather than glass bottles. The metal containers are more expensive, but do provide protection against breakage and spillage. Such purchase orders should state that more expensive containers are requested for safety purposes.

2. Guidelines for Labeling:

Indicate on the chemical container:

- a. Date received
- b. Date container was first opened
- c. Label all secondary containers (outside containment canister) with the following information:
 - i. Identity of chemical and solvent
 - ii. Concentration
 - iii. Date prepared
 - iv. Initials of the person who prepared the solution

3. Storage Locations:

Every chemical should have a specific site of storage in accordance with its specific storage requirements and should be returned immediately after use. Be sure to read the label on every container for storage instructions and follow those instructions accurately.

Approved storage cabinets for flammable liquid storage should be labeled “Flammable – Keep Away From Fire.”

In flammable liquid storage, mechanical ventilation should be sufficient to remove vapors before they reach a hazardous concentration.

The following guidelines should be used when storing chemicals:

- a. Store flammable liquids in approved safety cabinets/refrigerators. Label each safety cabinet with the maximum gallon capacity
- b. Do not use a chemical fume hood as a storage area for chemical or solvents. The cabinet below the fume hood is suitable for storage of some flammable chemicals if it is vented and labeled for flammable storage.
- c. Do not use open bench tops as storage locations
- d. Do not store acids and bases together. Store them near the floor
- e. Segregate highly toxic chemicals and carcinogens from all other chemicals. Store them in a well-marked, ventilated area. After opening, reseal the original container with tape and place it in an unbreakable secondary container.
- f. Store perchloric acid in a metal tray. Never store perchloric and sulfuric acids together.

4. Storage System:

The following method for storing chemicals is suggested so chemicals will be easy to locate. Maintain an alphabetical inventory list. This inventory should be placed on computer to facilitate easy updating.

The following information should be listed for each inventory item:

- a. Name of chemical
- b. Amount of chemical
- c. Date received
- d. Ordering information
- e. Hazard profile
- f. Storage location

With this retrieval system, incompatible chemicals will not be placed next to each other. Thus, chemicals can be shelved, placed in a safety cabinet, desecrator, refrigerator or freezer, and be found easily when needed.

Example:

Aniline
Amount Stored: 1 gallon
Date Received: November 15, 1999
Ordered: October 15, 1999 from Dow Chemical
1915 Milam Street
Shreveport, LA 71103

- Hazards:
1. Incompatible with nitric and hydrogen peroxide
 2. Readily absorbed through skin, wear gloves

Location: Shelf #5, Cabinet B

G. Storage of Flammable and Combustible Liquids

The following definitions and storage requirements are in accordance with National Fire Protection Association's National Fire Codes and Standards. (Vol. 3, 30-12, 30-13, 30-50)

1. Definitions:

- A. **Flammable Liquid** – a liquid having a flash point below 100 degrees Fahrenheit (37.8 Centigrade) and having a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100 degrees F and shall be known as a Class I liquid.

Flammable liquids are divided as follows:

Class IA shall include those having flash point below 73 degrees F and having a boiling point below 100 degrees F.

Class IB shall include those having flash points at or above 73 degrees F and having a boiling point at or above 100 degrees F.

Class IC shall include those having flash points at or above 73 degrees F and below 100 degrees F.

- B. **Combustible Liquid** – a liquid having flash point at or above 100 degrees F.

Combustible liquids are subdivided as follows:

Class II liquids shall include those having flash points at or above 140 degrees F.

Class IIIA liquids shall include those having flash points at or above 140 degrees F and below 200 degrees F.

Class IIIB liquids shall include those having flash points at or above 200 degrees F.

2. Storage Requirements

All flammable or combustible liquids in laboratories and other points of use shall meet the following storage requirements:

- a. No container for Class I or II liquids shall exceed a one-gallon capacity.
- b. No more than 10 gallons of Class I and Class II liquids combined shall be stored outside of an approved storage cabinet or approved storage room.
- c. Quantities of liquids in excess of those set forth in this safety standard shall be stored in an approved, inside of or outside, storage room.

H. Maximum allowable size of container

1. Container Size and Type:

		Flammable Liquids		Combustible Liquids
Container Type	Class IA	Class IB	Class IC	Class II
Class	1 pt.*	1 qt.*	1 gal.	1 gal.
Metal**	1 gal.	5 gal.	5 gal.	5 gal.

*Class IA and Class IB liquids may be stored in glass containers of not more than 1gal capacity if the required liquid purity (such as ACS analytical reagent grade or higher) would be affected by storage in metal container and if the liquid would cause excessive corrosion to metal container.

** Other than D.O.T. drums or approved plastic.

2. Classification of Common Flammable and Combustible Liquids:

Class IA	Diethyl Ether Diethyl Sulfide Ethyl Ether	Methyl Ethyl Ether Petroleum Ether Collodion Propylene Oxide
Class IB	Acetone Acetonitrile Benzene Iso-Butyl Acetate Cyclohexane 1,2-Dichloroethane Di-isopropyl Ether 1,4-Dioxane Ethanol Ethyl Acetate	Heptane Hexane Methanol Methyl Ethyl Ketone Paramount 2-Propanol Pyridine Toluene Triethylamine
Class IC	n-Butyl Acetate n-Butyl Alcohol Xylene	
Class II	Acetic Acid (Glacial) Dibutylamine Isopentyl Alcohol Propionic Acid	

I. Storage of Compressed Gases

For the purposes of safety, all volatile materials and mixtures packaged in cylinders will be considered compressed gases.

The handling of compressed gases must be considered more hazardous than the handling of liquid and solid materials. The increased risk is attributable to the unique properties of compressed gas: pressure, diffusiveness, low flash points, low boiling points, and no visual and/or odor detection of many hazardous

gases. In order to reduce the possibility of an accident, the following standards regarding the use, storage, and handling of compressed gases must be followed.

1. Use of Compressed Gases

- a. Cylinders should be clearly marked with the identity of the gas. Cylinder color should not be relied upon for content identification.
- b. Cylinder cap should be kept in place until time for connecting cylinder to equipment.
- c. Connections that do not fit should not be forced.
- d. Regulators, gauges, hoses and other appliances provided or use with a particular gas or group of gases should not be used on cylinders containing gases having different chemical properties unless information obtained from the supplier indicates that this can be done safely.
- e. Do not attempt to repair or alter cylinder, valves or attachments. This work should be done by the manufacturer.
- f. Cylinder valves should be opened slowly with the valve outlets and face of the gauge pointed away from you and other persons.
- g. A cylinder valve should never be forced. If a valve cannot be opened by hand, the cylinder should be returned and another obtained.
- h. A cylinder not having a handwheel valve should be opened with a spindle key, special wrench, or other tool provided or approved by the gas supplier.
- i. Connections to piping, regulators and other appliances shall be kept tight to prevent leakage. If leakage occurs, first close cylinder valve tight before attempting to stop leak.
- j. Before connecting a valve gauge or other fitting to a cylinder valve outlet, "crack" the valve for an instant to clear the opening of particles of dust or dirt.
- k. Never tamper with safety devices in valves or cylinders.
- l. Before a regulator is removed from a cylinder, the cylinder valve shall be closed and the pressure removed from the regulator/gauges.
- m. Once a cylinder is empty, it should be marked empty immediately and reported for removal.

2. Storage of Compressed Gases:

- a. All cylinders (empty or full) shall be secured in an upright position.

- b. Cylinders shall be grouped by types of gas, and the groups are arranged to account for the gases contained.
 - c. Full and empty cylinders shall not be stored near combustible substances.
 - d. Cylinders shall not be stored near combustible substances.
 - e. Cylinders shall not be stored near flammable liquids.
 - f. Cylinders shall not be stored near corrosive chemicals.
 - g. Oxygen cylinders and other oxygen apparatus shall be kept free from oil or grease.
 - h. Cylinders shall not be stored near exits, stairways, or areas normally used or intended for the safe exit of people.
 - i. Do not store cylinders where they can become part of an electrical circuit.
 - j. Cylinders can be stored on cylinder carts as long as they are secured and the cart is placed in a safe location.
 - k. Empty cylinder shall be removed from work areas and returned to vendor in a timely manner.
3. Handling of Cylinders:
- a. The valve-protection cap should be placed on the cylinder before transporting it, and left on until it has been secured and is ready for use.
 - b. Cylinders should not be moved by dragging or sliding. The user should use a suitable hand truck or similar device with the cylinder secured for transporting.
 - c. Cylinders should not be dropped or permitted to strike against each other or other surfaces violently.
 - d. Cylinders should not be moved with the cylinder valve open, and/or regulator or gauges attached. Always close the cylinder valve when not in use.

J. Incompatible Chemicals

Common Incompatible Chemicals

The following is a partial list of the more common incompatible chemicals. Reaction of such chemicals may produce:

- Toxic or flammable gases,
- Explosions, or
- Spontaneous ignition

Substances in the left column should be stored or handled in a manner that avoids contact with those listed in the right column.

This Chemical	Is Incompatible With
Acetic acid	Chromic acid, nitric acid, hydroxyl compound, ethylene glycol, peroxide, perchloric acid, permanganates
Acetone	Concentrated sulfuric and nitric acids
Acetylene	Chlorine, bromine, copper, fluorine, silver, mercury
Alkaline metal as powdered (aluminum or magnesium, sodium, potassium)	Water, carbon tetrachloride, or other chlorinated hydrocarbon, carbon dioxide, the halogens
Ammonia anhydrous	Mercury (in manometers), chlorine, calcium hypochlorite, hydrofluoric acid (anhydrous), bromine, iodine
Ammonium nitrate	Acids, metals powders, flammable liquids, chlorates, nitrates, sulfuric finely divided organic or combustible materials
Aniline	Nitric acid, hydrogen peroxide
Bromine	Same as for chlorine
Carbon, activated	Calcium hypochlorite, all oxidizing agents
Chlorates	Ammonium, salts, acids, metals, powder
Chlorine	Ammonia, acetylene, butadiene, butane, methane, propane (or other petroleum gases), hydrogen, sodium carbide, turpentine, benzene, finely divided metals
Chlorine dioxide	Ammonia, methane, phosphine, hydrogen sulfide
Chromic acid	Acetic acid, naphthalene, camphor, glycerin, turpentine, alcohol, flammable liquids in general
Copper	Acetylene, hydrogen peroxide
Cumin hydroperoxide	Acids, organic or inorganic
Cyanides	Acids
Flammables liquids	Ammonium nitrate, chromic acid, hydrogen peroxide, nitric acid, sodium peroxide, the halogens
Fluorine	Isolate from everything

Formic acid	Oxidizing agents
Hydrazine	Oxidizing agents
Hydrocarbons (butane, propane, benzene, gasoline, turpentine, etc.	Fluorine, chlorine, bromine, chromic acid, sodium peroxide
Hydrocyanic acid	Nitric acid, alkali
Hydrofluoric acid, anhydrous	Ammonia, aqueous or anhydrous
Hydrogen peroxide	Copper, chromium, iron, most metals or their salts, alcohol, acetone, organic materials, nitromethane, aniline, flammable liquids, combustible materials.
Hydrogen sulfide	Fuming nitric acid, oxidizing gases
Iodine	Acetylene, ammonia (aqueous or anhydrous), hydrogen
Mercury	Acetylene, fulminic acid, ammonia
Nitric acid	Acetic acid, aniline, chromic acid (concentrated), hydrocyanic acid, hydrogen sulfide, flammable liquids and gases.
Oxalic acid	Silver mercury
Oxygen	Oils, grease, hydrogen, all flammable
Perchloric acid	Acetic anhydride, bismuth and its alloys, alcohol, paper, wood
Picric acid	Metals, ammonia (avoid shock)
Potassium	Carbon tetrachloride, carbon dioxide, water
Potassium chlorate	Sulfuric and other acids
Potassium perchlorate (see also Chlorate)	Sulfuric and other acids
Silver	Acetylene, oxalic acid, tartaric acid, ammonium, compounds
Sodium	Carbon tetrachloride, water, carbon dioxide
Sodium peroxide	Ethyl or methyl alcohol, glacial acetic acid, acetic anhydride, benzaldehyde, carbon disulfide, glycerin, ethylene glycol, ethyl acetate, methyl acetate, furfural
Sulfuric acid	Potassium chlorate, potassium perchlorate, potassium permanganate (or compounds with similar light metals, such as sodium, lithium)
Water	Alkali metals, sulfuric, thionyl chloride

K. Chemical Fume Hoods:

A chemical fume hood is a cabinet used for exhaust of contaminated air. Protection from chemical vapors and gases is provided by sufficient velocity of air entering at the front and exhausting through the back and top. If a fume hood is not operating properly, or if it is misused, the airflow will be insufficient to capture and remove contaminants, thereby reducing the protection factor of the hood.

The face velocity of a chemical fume hood may be variable at times due to air disturbances caused by:

- a. Location of the hood in regard to open windows or doors
- b. Room air supply inlets
- c. Heavy traffic areas in the room

Normally, a chemical fume hood system consists of:

- d. Cabinet with sliding safety glass sash or viewing panel
- e. Duct work
- f. Exhaust blower

1. **Malfunctioning Hood:**

Immediately report any malfunction with the fume hood in your laboratory area by calling the Facilities, Management and Campus Services at ext. 2367. The Facilities Department will ensure that safety is provided to both laboratory and personnel.

2. **Proper Use:**

When using a chemical fume hood, follow these guidelines:

- a. Maintain the sash at the recommended operating height
- b. Keep the inside of the hood clean and uncluttered
- c. Make sure that any large objects that must be in a hood (e.g., water bath) are raised to allow airflow on all sides
- d. Perform all procedures at least six inches behind the plane of the sash.
- e. Do not place your face inside the fume hood
- f. Do not rely on the fume hood exhaust to protect you from projectile or solid objects
- g. Wear safety glasses and gloves

3. Inspection:

Chemical fume hoods are inspected semiannually by the Facilities Maintenance Department. The exhaust velocity is measured and the optimum sash height is determined. In meeting the face velocities for certification, the sash cannot be lower than eight inches above the work surface.

4. Certification:

If certification criteria are met, the hood will be labeled designating the classification of the hood and the sash height which will produce the optimum operating conditions. If the certification criteria cannot be met with minor adjustments, the hood will receive a label which reads "Danger-Hood Not Working – Do Not Use."

5. Biological Hood:

A biological hood is a cabinet designed to filter infectious and some toxic agents by means of High Efficiency Particular Air (HEPA) filters.

- a. All new biological hoods and hoods that have been relocated in the facility must be certified before use.
- b. Annually, all biological hoods must be recertified by an outside vendor. Purchasing will be notified when time for recertification.

L. Corrosive Chemicals

Corrosive Chemicals are commonly thought of as acids and bases, but dehydrating agents and oxidizing agents can also be corrosive. Listed below are several types of corrosive chemicals and some examples of each, as well as guidelines for use of corrosive chemicals.

Types of Corrosive Chemicals

Acids
(sulfuric, nitric hydrofluoric)

Bases
(sodium hydroxide, ammonia)

Dehydrating Agents
(sulfuric acid, sodium hydroxide, phosphorus pentoxide, calcium oxide)

Oxidizing Agents
(picric acid, chromic acid perchloric acid, peroxides, nitrates, nitrites)

1. Hazards of Personal Exposure:

- a. Strong acids and bases may cause serious damage to the skin and eyes
- b. Inhaling the vapors of corrosive chemicals can cause severe bronchial irritation
- c. Seek emergency care in the event of an inhalation accident.

2. First Aid Procedures:

If exposed to a corrosive chemical:

- a. Wash the affected area with copious amount of water
- b. Remove any contaminated clothing immediately

3. Guidelines for Storage:

Follow these guidelines to properly store corrosive chemicals:

- a. Strong oxidizers such as perchloric acid present force and explosion hazards when in contact with organics. Store in glass containers in a metal tray; away from organic flammable, dehydrating or reducing agents.
- b. Store ALL corrosives on a lower shelf near the floor level

4. Guidelines for Protective Clothing

When using corrosive chemicals:

- a. Always wear rubber apron, gloves, and goggles or a face shield.
- b. Never wear – contact lenses.

Contact lenses should not be worn by laboratory personnel because of the increased risk of eye injury from the chemicals. Chemical liquids, vapors or solids may become trapped under the lenses and cause serious damage to the eye before the lenses can be removed and the eye properly washed. In addition, the contact lenses can be damaged from exposure to some chemicals which in turn, could damage the eye.

5. Guidelines for Accident Prevention:

Remember:

- a. When diluting strong acids, add the acid slowly to the water to reduce the reactive effect.

A-	A-	A
Always	Add	Acid to the water

- b. Use corrosive chemicals ONLY in a fume hood.

Do not:

- c. Mix acids and bases together.
- d. Use corks or rubber stoppers with strong oxidizing agents.

M. Solvents

Organic solvents constitute one of the major hazards in a laboratory. Many are highly volatile or flammable, such as ether, alcohol, or toluene.

Chlorinated solvents such as chloroform are non-flammable, but when exposed to heat or flame, may produce carbon monoxide, chlorine, phosgene, or other highly toxic gases.

All volatile and flammable solvents should be used in a properly functioning chemicals fume hood. Never use ether or other highly flammable solvents in a room with open flames present, such as Bunsen burner.

1. Exposure Hazards:

Skin contact may produce defatting and drying. The paraffin series and the saturated hydro-carbon solvents are stronger skins irritants than those of the aromatic series.

Ingestion of a solvent could result in severe physiological effects.

Inhalation of solvent vapors may cause bronchial irritation, dizziness, central nervous system depression, nausea, headache or coma. Prolonged exposure to high concentrations of solvents may result in liver or kidney damage.

NOTE: Consumption of alcoholic beverages will accelerate these effects.

In case of skin contact, ingestion or inhalation of solvents, seek medical aid.

2. Respiratory Hazards:

A property of the following chemicals is that the odor threshold is higher than the acceptable exposure limit:

- Chloroform
- Benzene
- Carbon tetrachloride
- Formaldehyde

Therefore, if you can smell it, you may be overexposed. All four of the above solvents are suspected of being carcinogenic.

Substitution:

Substituting a solvent of lesser toxicity or hazard whenever possible is the best way to decrease the effects of solvent exposure. For example, two solvents may be equally toxic, but the one with a warning property, such as odor, is less hazardous.

Using a less volatile solvent is also a good substitution. The perfect all-around solvent is water, use it whenever possible. Examples of possible substitutions are listed in the following table.

Instead of Using	Substitute
Benzene	Cyclohexane, toluene, or cyclopentane

Carbon tetrachloride	Methylene chloride or 1,1,1-trichloroethane
Chloroform	Methylene chloride or 1,1,1-trichloroethane
Aromatic hydrocarbon	Aliphatic hydrocarbon
Trichloroethylene	1,1,1-trichloroethane
n-hexane	Pentane
Diethyl ether	Petroleum ether

3. Disposal:

List A	List B	List C
Peroxide Hazard from Storage (Discard at 3 months)	Peroxide Hazard from Concentration (Discard at 12 months)	Hazard from Peroxide Initiation of Polymerization (Discard at 12 months)
Isopropyl ether Divinyl acetylene Vinylidene Chloride	Ethyl ether Tetrahydrofuran Acetyl	Styrene Butadiene* Vinyl acetate
Potassium metal Sodium amide	Dicyclopentadiene Diacetylene Cumene Cyclohexene	Vinyl chloride Chloroprene* Tetrafluoro-ethylene

* When stored as a liquid, the peroxide-forming potential increases and the chemical should be a List A compound.

4. DMSO-Dimethyl Sulfoxide:

Dimethyl Sulfoxide (DMSO) is another organic solvent that is very popular, but which requires special handling procedures. DMSO can serve as either an oxidizing or a reducing agent. It is readily absorbed through unbroken skin and is rapidly distributed throughout the body. DMSO will facilitate the skin absorption of other chemicals.

Appropriate protective gloves should always be worn when using DMSO to avoid inadvertent exposure from hazardous chemicals dissolved in this solvent.

N. Reactive/Explosive Chemicals

Certain chemicals are considered reactive because they are sensitive to friction or shock, or because they react with water or air.

An explosive is a substance or mixture that decomposes or burns very rapidly when subjected to shock or flame. Large volumes of gases and extreme heat are produced simultaneously, resulting

in tremendous pressure which causes an explosion. Highly reactive chemicals with explosive properties require special storage, handling and disposal procedures.

1. Ether:

Ethyl ether, isopropyl ether, dioxin, and many other ethers absorb and react with oxygen in air to form unstable peroxides. The peroxides formed may explode if made concentrated by evaporation or when exposed to unusual heat or shock. Once an ether container has been opened, peroxide formation occurs rapidly.

Always order ethers in small-sized containers, such as ¼ - lb. Or 1 – lb. cans. Store in a cool place, such as an explosion-proof refrigerator. Otherwise, store ether in an open, well-ventilated location where vapors may be dispersed easily and diluted. Never keep ether more than twelve months, even if it has not been opened.

Due to the high flammability and the hazard of peroxide formation, special requirements must be taken in the storage and use of ethers.

- a. Appropriate storage area for all containers of ether that have been opened is an explosion-proof refrigerator which is so labeled by the manufacturer. Ether shall not be stored in a standard refrigerator.
- b. The quantity of ether purchased by a laboratory should be limited to the minimum amount required.
- c. Ether shall be used only in an appropriate hood and not on bench tops. All ether shall be kept away from sources of ignition.
- d. Laboratories routinely using ether shall place a sign on the door stating: “Caution: Ether in Use – No Smoking.”
- e. Call the Facilities Office, ext. 2367 for disposal.

2. Mercury:

Mercury, or quicksilver, is the only metal that is a liquid at room temperature. Its is widely used in scientific and medical equipment such as:

- Thermometers
 - Barometers
 - Sphygmomanometers
 - Mercury vapor lamps
 - Some feeding tube tips
 - Coulter counters
 - Electron microscopes
- a. Ingestion of elemental mercury from a broken thermometer constitutes little danger because this form of mercury is not readily absorbed from the gastrointestinal (GI) tract. However, in the event of a spill or an accident, mercury can present a potential hazard due to its highly toxic vapor.

The most important route of absorption of mercury is the respiratory tract. Mercury has a highly toxic vapor pressure, and at room temperature the equilibrium concentration of mercury vapor would be 20 mg/m³ or 200 times the ceiling level established by Occupational Safety and Health Administration (OSHA).

- b. General precautions to observe when handling elemental mercury are:
 - 1. Make sure the area is adequately ventilated
 - 2. Have any mercury spills or leaks collected immediately
 - 3. Do not smoke or eat in an area where mercury is being used
- c. All mercury spills should be reported to the Facilities Planning Office, Ext. 2367, immediately. The area in which the spill occurs should be isolated to the greatest degree possible until clean-up can be accomplished. A small mercury spill that occurs as a result of a broken thermometer should be cleaned up with the aid of a mercury spill kit.

3. Osmium Tetroxide:

Osmium tetroxide is a volatile solid whose vapor is extremely irritating to the eyes and respiratory system. The time weighed average (TWA) threshold limit value for exposure to Osmium Tetroxide is 0.2 ppb for an eight-hour workday. It is possible to purchase purified Osmium tetroxide as a 4% solution pre-packaged in 2 ml ampoules.

a. Use:

Some possible uses of OsO₄ (osmium tetroxide) include:

- 1. catalyst in the dehydrogenation of organic materials,
- 2. stain for histological examination of tissues,
- 3. oxidizing agent (support combustion),
- 4. fixative for tissues in electron microscopy

b. Precautions:

Osmium tetroxide should Only be used:

- 1. in a properly functioning chemical fume hood,
- 2. while wearing protective goggles and gloves

4. Perchloric Acid:

Perchloric acid is a colorless, fuming, oily liquid. When cold, its properties are those of a strong acid but when hot, the concentrated acid acts as a strong oxidizing agent.

a. Hazards:

Aqueous perchloric acid can cause violent explosions if misused, or when in concentrations greater than the normal commercial strength. Anhydrous perchloric is unstable even at room temperature and ultimately decomposes

spontaneously with a violent explosion. Contact with oxidizable materials can cause immediate explosion.

b. Precautions:

1. Perchloric acid shall be used in a fume hood.
2. Safety eyewear shall be worn at all times when working with perchloric acid.
3. A direct flame or oil bath shall not be used for heating perchloric acid.
4. Use quartz glassware in order to reduce chances of breakage and spills.
5. Use only explosion-proof electrical equipment around acid.
6. Avoid using more than 20 ml of perchloric per sample.
7. Do not allow perchloric acid samples to boil dry.
8. Identify location of nearest safety shower, eyewash, and fire extinguishers before using perchloric acid.
9. Each laboratory shall store no more than 1-lb. (450g) bottles of perchloric acid.
10. Separate perchloric acid from all organic materials and flammable compounds.
11. Do not allow perchloric acid to come in contact with strong dehydrating agents.
12. All stored perchloric acid should be checked monthly for discoloration; if any is noted, the acid should be discarded in accordance with government guidelines.
13. Report all spills to Facilities Planning office, Ext. 2367, immediately. Do not mop up spills; the acid must first be neutralized.

O. Criteria for Definition and Classification of Hazardous Waste

This policy shall apply to those materials carrying a hazard rating of two or higher in any class.

1. Ignitable

A waste will be considered a moderate ignitable hazard if a representative sample of the waste:

- a. is a liquid and has a flash point less than 140 degrees F determined by the methods cited in American Society for Testing Materials (ASTM) D-98-72 or ASTM 3278.

- b. not a liquid and is subjected to cause fires through friction, absorption or moisture, spontaneous chemical changes, or retained heat from manufacturing or processing.
- c. is an ignitable compressed gas as defined in 49 Code of Federal Regulations (CFR) 173.300 (b).
- d. is an oxidizer as defined in 49 CFR 173.51.

Levels of Ignitability and Degree of Hazard

Hazard Level	Description
0	None, material does not burn
1	Minor, material must be preheated to burn
2	Moderate, some heating is required for ignition and volatile vapors are released (flashpoint of 140 degrees)
3	Severe, material ignites at normal temperature
4	Extreme, very flammable substance that readily forms explosive mixtures

2. Corrosivity

A waste is a moderately corrosive hazardous waste if a representative sample of the waste:

- a. is aqueous and has a pH less than and equal to 2.5 or greater than or equal 5. to 12.5.
- d. Corrodes steel 9SAE 1020 at a rate greater than 0.250 inches per year at a test temperature of 130 degrees F.

Corrosivity

Hazard Level	Description
0	None
1	Minor
2	Moderate
3	Severe

3. Reactivity

A waste substance is classified as a reactive waster of moderate hazard if a representative sample of the waste is:

- a. is normally unstable and readily undergoes violent chemical change without detonating; reacts violently with water, forms potentially explosive mixtures with water; or is a cyanide or sulfide bearing waste which generates dangerous quantities of toxic gases, vapors or fumes when exposed to mild acid or basic conditions.
- b. is capable of detonation or explosive reaction but requires a strong initiating source or which must be heated under confinement before initiation can take place, or which reacts explosively with water.
- c. is readily capable or detonation or of explosive decomposition or reaction at normal temperatures and pressures.
- e. is a forbidden explosive as defined in 49CFR 173.52, a Class A explosive as defined in 49 CFR 173.58. Note: Such waste includes pyrophoric substances, explosive, auto-polymerizable materials and oxidizing agents. If it is not apparent whether a waste is a hazardous waste after applying this description, then the methods cited below or equivalent methods can be used to determine if the waste material should be categorized and treated as hazardous.

f.

Levels of Reactivity and Degree of Hazard

Hazard Level	Description
0	None, stable when exposed to fire
1	Minor, unstable at high temperatures or pressures and may react as noted above with water or mild acids or bases
2	Moderate, unstable but does not explode; may form explosive mixtures or noxious fumes with water or mild acids or bases.
3	Severe, explodes if heated or water added or forms toxic fumes with water, mild acids or bases.
4	Extreme, readily explosive under normal conditions or forms highly toxic fumes with water, mild acids or bases

4. Toxicity

The following chemical species shall be considered to offer at least a potential toxicity hazard requiring management:

- a. Designated heavy metals in elemental form, in salts, or organic compounds; in particular, antimony, arsenic, beryllium, boron, cadmium, copper, chromium, lead, mercury, nickel, selenium, silver, and thallium. These compounds constitute a risk of metabolic harm to higher animal life and when released in concentrations or quantities above a designated threshold must be managed carefully.
- b. Toxic anions, such as arsenate, arsenite, chromate, cyanides, fluoroaluminates, fluorides, phosphides.
- c. Extremely dangerous poisons including cyanogen, phosgene, hydrogen sulfide along with the dangerous poisons such as acetone, cyanohydrin and irritating substances such as bromobenzyl cyanide and chloroacetonephenone.
- d. Commercial poisons including fungicides and pesticides including DDT, aldrin, chlordane, endrin and toxaphene. The threshold of moderate hazard for these and other uncharacterized toxic chemicals (acute and chronic) shall be taken as equivalent to Toxic Hazard Rating Materials.

Levels of Reactivity and Degree of Hazard

Hazard Level	Description
0	None, stable when exposed to fire
1	Minor, unstable at high temperatures or pressures and may react as noted above with water or mild acids or bases
2	Moderate, unstable but does not explode; may form explosive mixtures or noxious fumes with water or mild acids or bases.
3	Severe, explodes if heated or water added or forms toxic fumes with water, mild acids or bases.
4	Extreme, readily explosive under normal conditions or forms highly toxic fumes with water, mild acids or bases

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- b. Toxic anions, such as arsenate, arsenite, chromate, cyanides, fluoroaluminates, fluorides, phosphides.
- c. Extremely dangerous poisons including cyanogen, phosgene, hydrogen sulfide along with the dangerous poisons such as acetone, cyanohydrin and irritating substances such as bromobenzyl cyanide and chloroacetonephenone.
- d. Commercial poisons including fungicides and pesticides including DDT, aldrin, chlordane, endrin and toxaphene. The threshold of moderate hazard for these and other uncharacterized toxic chemicals (acute and chronic) shall be taken as equivalent to Toxic Hazard Rating Materials.

Levels of Toxicity and Degree of Hazard

Hazard Level	Description
0	None
1	Minor
2	Moderate (indicated test); can cause temporary incapacitation or injury
3	Severe; short exposure may cause serious injury
4	Extreme; short exposure may cause death

P. Hazardous Waste Disposal Program

Collection of Hazardous Waste Procedure

1. A department having hazardous waste to be collected will contact the Safety Officer at Ext. 3174. At that time the Safety Officer will make the necessary arrangements for transporting and disposal of the waste.
3. Each container of waste must have a label, as shown below, filled out and placed on it. Labels can be obtained from the Safety Officer.

Chem _____
Dept. _____
Location _____
Name _____
Flamm. _____ Acid _____
Toxic _____ corrosive _____
Reactive _____

Explanation of Label

Chem. – proper name of chemical

Location – room number of label in which waste was generated

Name – name of Instructor or Laboratory Technician

Flamm., acid, corrosive., reactive – proper classification of waste.

4. The generating section will also present the Safety Officer with a Hazard Material and Hazardous Waste Record Card filled out with the correct information. The instructor will also be required to maintain a copy on file in his or her laboratory.

Q. Emergency Plan for Chemical Spills

- Notification:
1. Safety Officer – 274-3174
 2. After hours, weekends, etc., notify University Police at ext. 2222, who will contact Safety Officer on call.

3. If University Police are unable to locate Safety Officer, call the Grambling Fire Department and request assistance.

Spill Clean-up Procedures:

1. First response will be to confine spill and identify chemical involved.
2. No one shall enter spill area without proper safety equipment
3. When a flammable liquid is spilled or a flammable gas cylinder is leaking, all sources of ignition in the area shall be extinguished
4. Clean-up procedures will be based on chemical and degree of hazard associated with chemical and amount spilled.
5. The Safety Officer will oversee all clean-up procedures
6. All contaminated material will be placed in 55 gallon drums and labeled to identify content.
7. This material will then be disposed of by the Safety Officer through a licensed hazardous waste vendor.

R. Conclusion

Strict adherence to the guidelines prescribed in this manual will place Grambling State University in full compliance with Federal Environmental Protection Agency requirements for safe handling and disposal of hazardous substances. It will also help to ensure a safe campus environment for students, faculty, and staff. The maintenance of a safe campus environment is not and cannot be the sole responsibility of one individual. The combined effort, concern and cooperation of the entire GSU family is needed in order to protect our campus from the often detrimental effects of careless handling of hazardous waste. Thus, it is imperative that we learn and abide by the guidelines set forth in this manual.

DRIVER SAFETY PROGRAM

The Office of Safety and Risk Management maintains employee driver licenses solely for the purpose of the Safety Driver Program. The Office of Risk Management in accordance with LAC Title 37.[2.1.1] Its purpose is to provide a systematic method of screening, training, and accountability for employees and supervisors required to assign or drive state owned vehicles or personal vehicles on state business.

The Safety Driver Program does not include every employee. The Office of Safety and Risk Management obtains a copy of current driver licenses from employees that seek driving privileges. Authorized driver privileges are not mandatory and are the responsibility of the employee to maintain current driving privileges. However, monthly reminders will be sent through email to the GSU distribution list from safetyandriskmana@gram.edu, or safety@gram.edu, to remind employees to check their authorized driver status.

For driver authorization policy and procedures go to Safety and Risk Management website page

<https://gram.edu/>

click: gsu.net

click: [Safety & Risk Management](#)