

FLORIDA INTERNATIONAL UNIVERSITY

UNIVERSITY SAFETY COMPLIANCE GUIDE

GENERAL SAFETY

SECTION 100

ENVIRONMENTAL HEALTH & SAFETY,
INSURANCE & EMERGENCY MANAGEMENT SERVICES

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GENERAL SAFETY

USCG 101 - BLOODBORNE PATHOGENS EXPOSURE

Last Update: 05/01/01

PURPOSE

To protect employees from the risks of infection with the Human Immunodeficiency Virus (HIV), Hepatitis B virus, or other bloodborne pathogens; and to comply with the requirements of the OSHA Standard 29 CFR, 1910.1030 Bloodborne Pathogens.

DEFINITIONS

Blood: human blood, human blood components, and products made from human blood.

Bloodborne Pathogens: pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Other Potentially Infectious Materials:

- The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.
- Any unfixed tissue or organ (other than intact skin) from a human (living or dead).
- HIV-containing cell or tissue cultures, organ cultures, and HIV-or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.
- Occupational Exposure: reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

GUIDELINES

These guidelines apply to all University personnel, employees, students and visitors, who are exposed to blood or other potentially infectious materials while on University premises or involved in University sponsored activities.

1. Each Dean, Director or Department head, in consultation with the Department of Environmental Health & Safety and the FIU Office of Human resources is responsible for determining the job classifications that are subject to regulation by the OSHA Bloodborne Pathogens Standard, hereafter referred to as the Standard.
2. The Department of Environmental Health & Safety shall maintain a current Exposure Control Plan (ECP) for the University.

3. Deans, directors, chairpersons, principal investigators, laboratory instructors, and line supervisors shall assure compliance with the requirements established in the University ECP. Individuals responsible for assuring compliance with this guideline shall correct violations and modify inappropriate practices upon detection. Disciplinary actions shall be taken as needed.
4. Hepatitis B vaccinations shall be offered to all individuals who are occupationally exposed to bloodborne pathogens. Vaccines shall be provided free of charge to employees who are subject to regulation by the Standard. Payment shall be made by the employee's department

For further information or copies of the FIU Exposure Control Plan, please contact the Department of Environmental Health & Safety at 348-2621.

USCG 102 - SAFE USE AND STORAGE OF COMPRESSED GAS CYLINDERS

Last Update: 06/26/02

PURPOSE

To establish a standard for the safe use and storage of compressed gas cylinders.

GUIDELINES

To implement safety guidelines for the safe use and storage of compressed gas cylinders and to ensure the safe handling and storage of compressed gas cylinders at the University premises.

1. General Use of Gas Cylinders

- a. Know the contents of a cylinder and be familiar with the properties of that gas.
- b. Never use a cylinder that cannot be positively identified. Do not depend on color coding for gas identification.
- c. All cylinders must bear an identification tag stating the name of the gas or mixture and illustrating one of three conditions: full, in service, or empty.
- d. Handle cylinders carefully and fasten them in a secure manner at all times, in an upright position.
- e. Transport larger cylinders only on a wheeled cart specifically designed for gas cylinders. This applies to all cylinders of size 2 or larger. Remove regulators and attach safety caps before transport.
- f. Never tamper with any part of a valve, such as the safety or packing nuts.
- g. Do not strike an electric arc on cylinders.
- h. Use cylinders only with matched connectors and proper Compressed Gas Association regulators. Never install cylinder adaptors on a regulator. A regulator registration and periodic inspection program should be initiated by the gas users.
- i. Leak test all connections to a cylinder with a soap solution. Caution: Any gas, regardless of its health hazard, may cause asphyxiation by displacing oxygen.
- j. Close cylinder valves when not in use, then bleed pressure from the regulator.
- k. Close valves on empty cylinders and mark "empty."
- l. Never attempt to refill a cylinder.

This guideline adopts as recommended practice all applicable National Fire Protection Association (NFPA) codes when applied to the design and construction of all new facilities where compressed gas cylinders will be used and stored.

- m. Cylinders of compressed gases must be handled as high energy sources and therefore as potential explosives.
- n. When storing or moving a cylinder, have the cap in place to protect the valve stem.
- o. Do not expose cylinders to temperatures higher than 50° C (122° F).
- p. When classifying a gas mixture for use in the laboratory, base the classification on the most hazardous component.
- q. Never bleed a cylinder completely empty. Leave a slight pressure to keep contaminants out. Notify the vendor with a note if draw down occurs.
- r. Always wear safety glasses when handling and using compressed gases.

- s. Ground all cylinders containing flammable gases.
- t. When using gases with cryogenic properties, allow adequate ventilation and wear personal protection equipment including heavy gloves and safety goggles. (Gloves must be loose fitting to facilitate rapid removal in case of a spill).
- u. The number of cylinders of flammable gases and oxygen is limited to a maximum of three per laboratory (refer to appendix).
- v. Cylinders which are not necessary for current operations shall be stored safely outside the laboratory.
- w. Cylinders of all gases having a health hazard rating of 3 or 4 and cylinders of gases having a health hazard rating of 2 with no physiological warning properties shall be kept in a continuously mechanically ventilated enclosure. There will be no more than three cylinders of these hazard ratings per hood or other continuously mechanically ventilated enclosure per laboratory (refer to Laboratory Safety Manual).
- x. When transporting cylinders on elevators, passengers should be prohibited from entering until the cylinders have been unloaded at their destination. Signs should accompany the cylinder-in-transit warning passengers not to enter.

2. Storage of Gas Cylinders

- a. Store cylinders in a ventilated area away from heat or ignition sources.
- b. Fasten cylinders securely at all times in an upright position.
- c. Cylinders in storage must be protected from weather extremes and direct sunlight. Protect the base of cylinders from dampness.
- d. Store flammable gases away from all other gases. This will be accomplished by a separation of at least 20 feet of open space or by a wall having a fire rating of at least one hour (refer to appendix).
- e. Safety caps shall be in place at all times during storage and transport of cylinders. Cylinders of all gases having a health hazard rating of 3 or 4 and cylinders of gases having a health hazard rating of 2 with no physiological warning properties shall be stored in a continuously mechanically ventilated enclosure if inside a building. If stored outside, the gases must be kept under lock and key and located away from populated areas and air intakes to buildings (refer to appendix).
- f. Cylinders will not be stored or left unattended in hallways, corridors, stairways, or other areas of access and/or egress.
- g. When classifying a gas mixture for storage, base the classification on the most hazardous component.
- h. Always separate empty and full cylinder storage.

3. Transportation (excluding in building transport)

- a. Cylinders shall not be transported in a motor vehicle by University personnel on a routine basis. This transport should be handled by a licensed outside vendor.
- b. If transport by University personnel is absolutely necessary, contact the Department of Environmental Health and Safety at 348-2621 for approval prior to transport.

USCG 103 - CONTROL OF BIOHAZARDOUS MATERIALS IN RESEARCH AND EDUCATION

Last Update: 06/01/01

PURPOSE

To minimize the risk to research and education personnel from exposures to biohazardous materials through the application of administrative and engineering controls.

STANDARD

No person shall purchase, possess, use, transfer, propagate, or dispose of any biohazardous materials as defined below except with the approval of and in accordance with procedures established by the University Biosafety Committee and/or the Department of Environmental Health & Safety.

DEFINITIONS

1. General Definition of a Biohazard

A biohazardous agent is one that is biological in nature, capable of self-replication, and capable of producing deleterious effects upon other biological organisms, particularly humans. Biohazards are biological agents or substances present in or arising from the work environment that present or may present a hazard to the health or well-being of the worker or community.

Biological agents or substances that could be biohazardous include, but are not limited to, infectious or parasitic agents; non-infectious microorganisms such as some fungi, yeasts, and algae; plants and plant products; and animals and animal products that cause occupational disease. The level of biohazard established for a specific agent is made on the basis of the potential hazard of the agent and of the specific laboratory functions or activities.

2. General Categories of Biohazardous Agents

- a. Bacteria
 - i. Bacterial pathogens
 - ii. Bacteria with drug resistance plasmids
- b. Fungi
- c. Viruses
 - i. Oncogenic viruses
 - ii. Other animal viruses
- d. Rickettsiae
- e. Chlamydiae
- f. Parasites
- g. Recombinant DNA and products
- h. Allergens
- i. Cultured animal cells and the potentially infectious agents these cells may contain.
- j. All clinical specimens (tissues, fluids, etc.)
- k. Tissues from experimental animals (including animal dander)

- l. Plant viruses, bacteria and fungi
- m. Toxins (bacterial, plant, etc.)
- n. Prions

PROCEDURES

All research projects involving biohazards as defined above must:

1. Be reviewed by and subject to the approval process of the University Biosafety Committee and/or the Department of Environmental Health & Safety. Please contact the Division of Sponsored Research & Training at (305) 348-2494 for additional information
2. Conform with applicable procedures listed in the following references:
 - a. CDC/NIH Biosafety in Microbiological and Biomedical Laboratories. Most current edition. (<http://www.cdc.gov/od/ohs/biosfty/bmbl/bmbl-1.htm>)
 - b. NIH Guidelines for Research Involving Recombinant DNA Molecules. Most current edition. (<http://www.nih.gov/od/orda/toc.htm>)
 - c. Florida International University Biosafety Guidelines.
3. Conform with any restrictions or regulations applied by the U.S. Public Health Service or the U.S. Department of Agriculture.
4. If a combination of items B and C apply, contact the Biosafety Officer for resolution.
5. This USCG does not apply to the diagnosis and treatment of disease by a licensed practitioner or veterinarian in a non-research setting.
6. For information regarding contact with blood, body fluids, and tissue, see USCG Document # 101 "Bloodborne Pathogens Exposure on Campus"
7. For information regarding infectious waste disposal, refer to USCG Document # 304, "Infectious Waste Management."
8. For risk group classifications of microorganisms, see the following resources:
 - a. NIH Guidelines for Research Involving Recombinant DNA Molecules (<http://www.nih.gov/od/orda/toc.htm>)
 - b. American Biological Safety Association Risk Group Classification for Infectious Agents. (<http://35.8.104.121/riskgroups/default.htm>)
9. Exceptions to this USCG may be requested by contacting the Biosafety Officer who may conditionally grant such subject to final review by the University Biosafety Committee.

For more information regarding this guideline, contact the Department of Environmental Health and Safety at (305) 348-2621.

USCG 104 - EYE PROTECTION

Last Update: 02/07/06

PURPOSE

To establish a university eye protection standard.

SCOPE AND APPLICATION

This guideline applies to all University personnel including students in a research or instructional setting or visitors to high hazard areas.

STANDARD

1. Deans, directors, chairpersons, principal investigators, laboratory instructors, and line supervisors should assure compliance with this guide. Individuals responsible for assuring compliance with this USCG shall correct infractions upon detection. Disciplinary actions shall be taken as needed.
2. Each college, school, department or unit shall provide or otherwise make available to each employee required to wear eye protection the devices commensurate with the activity and hazard involved. Students may be required to purchase their own eye protection devices. For recommendations regarding a purchase agreement for safety glasses, contact the Department of Environmental Health & Safety at 348-2621.
3. All eye protection devices used must be American National Standards Institute Z87.1 approved. This can be determined by checking for an ANSI Z87 or Z87 stamped on the frame of the glasses or goggles.
4. Departments are responsible to develop reinforcement programs to encourage employees to comply with the established eye protection equipment requirements.

EYE PROTECTION AREAS

1. Eye protection shall be utilized by all individuals, working under direct control of the University or University faculty, in University facilities and/or operations in which activities take place involving:
 - a. Gas or electric arc welding.
 - b. Hot molten metals.
 - c. Heat treating, tempering or kiln firing of any metal or other material.
 - d. Corrosive, toxic or explosive material.
 - e. Compressed gases.
 - f. UV lights and lasers unless exempted by the Department of Environmental Health and Safety, Laser Safety Officer.
 - g. Chemicals: liquid and/or solid.
 - h. Unsealed sources of radioactive material.
 - i. Infectious and potentially infectious materials.
 - j. Milling, sawing, turning, shaping, cutting, grinding or stamping of any solid material.

- k. Repair or servicing of mechanical equipment which is reasonably anticipated as hazardous to the eye.
 - l. Custodial, grounds-keeping or other service activity reasonably anticipated as hazardous to the eye.
 - m. Sports related activities which place the eye at risk to impact. Appropriate nationally recognized sporting associations can serve as a source of generally accepted standards for eye protection equipment.
 - n. Any other operation involving mechanical or physical activities that are reasonably anticipated as hazardous to the eye.
2. Every person shall wear eye protection devices when entering, participating in, observing or performing any function in connection with, any course or activity taking place in eye protection areas as defined above. Persons covered include, administrators, faculty, staff, students, contractors, other employees and visitors.
 3. University personnel shall follow this guideline when conducting University sponsored activities at other locations.
 4. Chemical goggles shall be utilized when there is a liquid splash, spray or mist hazard. Exceptions to this requirement must be approved by the Department of Environmental Health and Safety.
 5. Safety glasses shall be worn at all times in those University laboratories where eye hazards exist.
 6. Locations identified above shall post signage indicating, “eye protection required.”

PERSONAL PROTECTIVE EQUIPMENT CHARTS

Eye and Face Protection Selection Chart

Source	Assessment of Hazard	Protection
Impact - Chipping, grinding, machining, masonry work, working, sawing, drilling, chiseling, powered fastening, riveting, sanding	<ul style="list-style-type: none"> • Flying fragments, objects, large chips, particles of sand, dirt, etc. 	<ul style="list-style-type: none"> • Spectacles with side protection, goggles, face shields. See notes 1, 3, 5, 6, and 10. • For severe exposure use face shield.
Heat - Furnace operations, pouring, casting, hot dipping, and welding.	<ul style="list-style-type: none"> • Hot sparks. • Splash from molten metals. • High temperature exposure. 	<ul style="list-style-type: none"> • Face shields, goggles, spectacles with side protection. • For severe exposure use face shield. See notes 1, 2, and 3. • Face shield worn over goggles. • Screen face shields, reflective face shields. See notes 1, 2, and 3.

Chemicals - All chemical handling	<ul style="list-style-type: none"> • Splash • Irritating Mists 	<ul style="list-style-type: none"> • Goggles, eyecup and cover types. • For severe exposure use face shield. • See notes 3 and 11. • Special purpose goggles.
Dust - Woodworking, buffing, general dusty conditions	<ul style="list-style-type: none"> • Nuisance dust 	<ul style="list-style-type: none"> • Goggles, eyecup and cover types. See note 8.
Light Radiation Welding: Electric arc	<ul style="list-style-type: none"> • Optical radiation 	<ul style="list-style-type: none"> • Welding helmets or welding shields. • Typical shades: 10-14. See notes (9), (12).
Welding: Gas	<ul style="list-style-type: none"> • Optical radiation 	<ul style="list-style-type: none"> • Welding goggles or welding face shield. • Typical shades: <ul style="list-style-type: none"> ○ Gas welding 4 - 8, ○ Cutting 3 - 6, ○ Brazing 3 - 4. ○ See note 9.
Cutting, torch brazing, torch soldering	<ul style="list-style-type: none"> • Optical radiation 	<ul style="list-style-type: none"> • Spectacles or welding face shield. • Typical shades 1.5 - 3. • See notes 3 and 9.

Notes:

Care shall be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards shall be provided. Protective devices do not provide unlimited protection.

1. Operations involving heat may also involve light radiation. Protection from both hazards must be provided.
2. Face shields shall only be worn over primary eye protection (spectacles or goggles).
3. Filter lenses must meet the requirements for shade designations in 29 CFR 1910.133(a)(5). Tinted and shaded lenses are not filter lenses unless they are marked or identified as such.
4. Persons whose vision requires the use of prescription (Rx) lenses must wear either protection devices fitted with prescription (Rx) lenses or protective devices designed to be worn over regular prescription (Rx) eyewear.
5. Wearers of contact lenses must also wear appropriate eye and face protection devices in a hazardous environment. It shall be recognized that dusty and/or chemical environments may represent an additional hazard to contact lens wearers.
6. Caution shall be exercised in the use of metal frame protective devices in electrical hazard areas.

7. Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleansing may be necessary.
8. Welding helmets or face shields shall be used only over primary eye protection (spectacles or goggles).
9. All safety glasses must have side shields in place. This is minimum protection.
10. Ventilation shall be adequate, but well protected from splash entry. Eye and face protection shall be designed and used so that it provides both adequate ventilation and protects the wearer from splash entry (per ANSI Z87-1.1989).
11. Protection from light radiation is directly related to filter lens density. See note (4). Select the darkest shade that allows task performance.

For more information regarding this guideline, contact the Department of Environmental Health and Safety at (305) 348-2621.

USCG 105 - PERSONAL PROTECTIVE EQUIPMENT

Last Update: 02/07/06

PURPOSE

To establish personal protective equipment requirements for the University

SCOPE AND APPLICATION

This standard applies to all University personnel

GUIDELINES

Deans, directors, chairpersons, principal investigators, laboratory instructors, and supervisors should assure compliance with this standard. Individuals responsible for assuring compliance with this standard shall correct infractions upon detection. Disciplinary actions shall be taken as appropriate.

Each college, school, department or unit shall provide, or otherwise make available to each employee required to wear personal protective equipment, the devices commensurate with the activity and hazard involved. Students may be required to purchase their own personal protective equipment.

Personal protective equipment requirements shall be established by conducting a Job Hazard Analysis for activities performed. Supervisors may conduct evaluation or they may contact the Department of Environmental Health and Safety to perform this evaluation. Additional information is available from the Department of Environmental Health and Safety.

Personal protective equipment requirements must meet or exceed requirements specifically established by the Occupational Safety and Health Administration.

Departments should develop positive reinforcement programs to encourage employees to comply with the established personal protective equipment requirements or execute disciplinary procedures as necessary.

Initial training shall be provided to personnel regarding selection, use and maintenance of personal protective equipment requirements before employees are assigned to perform any activity requiring use of personal protective equipment.

PROTECTIVE EQUIPMENT CHART

Hand Protection Selection Chart

Gloves are often relied upon to prevent cuts, abrasions, burns, and skin contact with chemicals that are capable of causing local or systemic effects following dermal exposure. There are no gloves available that provide protection against all potential hand hazards, and commonly available glove materials provide only limited protection against many chemicals. Therefore, it is important to select the most appropriate glove for a particular application and to determine how

long it can be worn, and whether it can be reused. Hypoallergenic gloves must be provided if necessary.

The following chart can be used as a guide in determining the correct chemical protective clothing material for the chemical hazard. For the best protection, check with the manufacturer for degradation and permeation information.

Chemical	Excellent	Good	Do Not Use
Acetaldehyde	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Natural Rubber • Neoprene 	<ul style="list-style-type: none"> • Nitrile • PVA • PVC
Acetic Acid, Glacial	<ul style="list-style-type: none"> • Neoprene 	<ul style="list-style-type: none"> • Natural Rubber • Nitrile 	<ul style="list-style-type: none"> • PVA • PVC
Acetone	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Natural Rubber • Neoprene 	<ul style="list-style-type: none"> • Nitrile • PVA • PVC
Benzene	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • PVA 	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • Nitrile
Butanol	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • Nitrile 	<ul style="list-style-type: none"> • PVC 	<ul style="list-style-type: none"> • PVA
Butyl Cellosolve (2-ethoxyethanol)	<ul style="list-style-type: none"> • Neoprene • Nitrile 	<ul style="list-style-type: none"> • Natural Rubber 	<ul style="list-style-type: none"> • PVA • PVC
Butyl Acetate	<ul style="list-style-type: none"> • PVA 	<ul style="list-style-type: none"> • Nitrile 	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • PVC
Cellosolve (2-ethoxyethanol)	<ul style="list-style-type: none"> • Neoprene 	<ul style="list-style-type: none"> • Nitrile 	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • PVC
Chloroform	<ul style="list-style-type: none"> • PVA 	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • Nitrile • PVC
Ethyl Acetate	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • PVA 	<ul style="list-style-type: none"> • Nitrile • PVC
Ethylene Glycol	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • Nitrile • PVC 	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • PVA

Formaldehyde (>10%)	<ul style="list-style-type: none"> • Nitrile 	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • PVC 	<ul style="list-style-type: none"> • PVA
Hexane	<ul style="list-style-type: none"> • Neoprene, • Viton 	<ul style="list-style-type: none"> • PVA 	<ul style="list-style-type: none"> • Natural Rubber • PVC
Isoproponal	<ul style="list-style-type: none"> • Natural Rubber • Nitrile • Viton 	<ul style="list-style-type: none"> • PVC 	<ul style="list-style-type: none"> • PVA
Methanol	<ul style="list-style-type: none"> • Natural Rubber, • Neoprene 	<ul style="list-style-type: none"> • PVC 	<ul style="list-style-type: none"> • PVA
Methylene Chloride	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • PVA • Viton 	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • PVC
Methyl Ethyl Ketone	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Natural Rubber • PVA 	<ul style="list-style-type: none"> • Neoprene • Nitrile • PVC
Methyl Isobutyl Ketone	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Natural Rubber • PVA 	<ul style="list-style-type: none"> • Neoprene • Nitrile • PVC
Mineral Spirits	<ul style="list-style-type: none"> • Nitrile • PVA 	<ul style="list-style-type: none"> • Neoprene 	<ul style="list-style-type: none"> • Natural Rubber • PVC
Nitric Acid (70%)	<ul style="list-style-type: none"> • Neoprene 	<ul style="list-style-type: none"> • PVC 	<ul style="list-style-type: none"> • Natural Rubber • Nitrile • PVA
Perchlorethylene	<ul style="list-style-type: none"> • PVA • Viton 	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • PVC
Sodium Hydroxide	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • Nitrile 	<ul style="list-style-type: none"> • PVC 	<ul style="list-style-type: none"> • PVA
Sulfuric Acid (95%)	<ul style="list-style-type: none"> • PVC 	<ul style="list-style-type: none"> • Neoprene 	<ul style="list-style-type: none"> • Natural Rubber • Nitrile • PVA
Toluene	<ul style="list-style-type: none"> • Viton 	<ul style="list-style-type: none"> • PVA 	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • PVC
1,1,1-Trichloroethane	<ul style="list-style-type: none"> • PVA 	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • PVC
Xylene	<ul style="list-style-type: none"> • PVA • Viton 	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Natural Rubber • Neoprene • PVC

Notes:

1. PVC = Polyvinyl Chloride
2. PVA = Polyvinyl Alcohol
3. None implies that there is no protection for this quality, NOT that no protection is best.

For more information regarding this guideline, contact the Department of Environmental Health and Safety at (305) 348-2621.

USCG 106 - ELEVATOR SAFETY

Last Update: 05/01/01

PURPOSE

To provide guidance on the appropriate response for emergencies occurring in or related to elevators.

SCOPE AND APPLICATION

This guidance document shall include all present and future elevators as outlined below:

- Passenger elevators.
- Freight elevators.
- Construction elevators.
- Lift elevators.

GUIDELINES

Emergency Response

If an occupied elevator fails and the occupants are panicked or injured, if their life is threatened, or if they will be trapped in excess of thirty minutes, upon notification, the Public Safety Department shall immediately contact the Metro-Dade Fire Rescue unit.

In the event of an accident that results in an injury to life or limb, proper documentation shall be completed and filed with the Public Safety Department, the Facilities Management Department and the Department of Environmental Health & Safety.

Non-Emergency Response

If an occupied elevator fails and the passengers are calm, uninjured and their lives are not in danger, all attempts shall be made to remove the passengers using in-house resources. No attempt shall be made to remove passengers trapped in an elevator between floors. If the elevator is at normal floor level, make sure the car is secured, then attempt to remove the occupants. At no time shall people be removed through the ceiling hatch of an elevator.

During normal working hours, the Work Management Center shall notify the University elevator contractor, Department of Environmental Health & Safety and Public Safety unless notification was received from the Public Safety Department. After normal working hours, holidays or weekends, the University Police dispatcher shall notify the Facilities Management Department on call personnel.

For more information regarding this guideline, contact the Department of Environmental Health and Safety at (305) 348-2621.

USCG 107 - HEARING PROTECTION & CONSERVATION

Last Update: 05/01/01

PURPOSE

To protect workers from the effects of noise overexposure.

SCOPE

University wide.

GUIDELINES

All workers who are subjected to a noise level of 85 dBA (action level) or above are to be included in a Hearing Conservation Program as specified by OSHA regulations.

1. Monitoring

All workplaces suspected of having noise levels that may exceed the action level will be monitored by the Department of Environmental Health and Safety to accurately identify employees who receive daily noise doses at or above the action level.

- a. Noise levels must be measured whenever any change relating to noise production is suspected of increasing exposures to the extent that additional employees may be exposed at or above the action level, or the attenuation provided by the selected hearing protection is inadequate.
- b. Noise levels must also be measured to determine the effectiveness of any engineering controls that are installed.
- c. Monitoring may be accomplished by an area survey technique in which sound level meter readings are combined with estimates of the length of exposure of individuals to particular sound levels in order to calculate an 8 hour Time Weighted Average (TWA), or may be measured by personal sampling method by the use of noise dosimeters.

2. Audiometric Testing

- a. Employees are required to have a baseline audiogram taken within six months of their first exposure at or above the action level. Employees with continual exposures at or above the action level must be provided with annual audiograms.
- b. Baseline audiograms must be preceded by 14 hours without exposure to workplace noise; however, hearing protectors may be used as a substitute for this requirement.
- c. Annual audiograms must be obtained during paid working hours.

3. Hearing Protection

Hearing Protectors must be made available to all workers exposed at or above the action level. The use of hearing protection is mandatory for those exposed at or above the Permissible Exposure Limit (PEL).

- a. The employee's department must provide a variety of suitable hearing protectors from

which employees may choose. This requires the availability of at least one type of plug and one type of muff.

- b. The hearing protectors must be supplied to employees at no cost, and replaced as necessary. University department are not expected to pay for an unlimited supply of protectors or to replace devices that are lost or damaged due to employee negligence.

4. Training

Employees exposed at or above the action level must be trained at least annually regarding the effects of noise; the purpose, advantages, disadvantages and attenuation of hearing protection being offered; the selection, fitting, and care of protectors; and the purpose and procedures of audiometric testing. Supervisors are responsible to assure that employees receive annual training and evaluation.

5. Record keeping

- a. Noise exposure records must be retained for two years, but data older than two years should not be discarded unless additional monitoring has been performed. Audiometric test records are to be retained for the duration of the employee's service at the University.
- b. Changes in employees hearing acuity that exceed an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear, relative to the baseline audiogram, are considered to be a Standard Threshold Shift (STS).

6. Noise Reduction

The reduction or elimination of noise producing sources and/or employee exposure should be sought through administrative (e.g., modified work schedule) and/or engineering controls.

7. Responsibilities

The Department of Environmental Health and Safety will be responsible for the coordination of the overall program, with specific responsibility for:

- a. Assessing the need for hearing protection for those employees who have been identified for inclusion in the Hearing Conservation Program
- b. Recommendation and selection of the types of hearing protection to be provided to University employees.
- c. Providing initial training and written instructions for care, use and maintenance of hearing protection.
- d. Conducting periodic inspections and evaluation to determine the continued effectiveness of the program.
- e. Maintain copies of all records relating to workplace monitoring and audiometric testing. Audiograms will be held in those employee records maintained by the Department of Environmental Health and Safety for forty years.

8. Departmental Responsibilities

Actual implementation of the program is the responsibility of the individual department in which exposed employees work. These responsibilities include:

- a. Establish an employee audiometric testing program through a medical provider.
- b. Supplying copies of audiometric testing results to the Department of Environmental Health and Safety.
- c. Purchase of hearing protection devices as recommended by the Department of Environmental Health and Safety.
- d. Coordination of employee training schedules with the Department of Environmental Health and Safety.
- e. Enforcement of the proper care and usage of assigned hearing protection.
- f. Employee Responsibility
To use the hearing protection provided in accordance with the instructions and training received.

For more information regarding this guideline, contact the Department of Environmental Health and Safety at (305) 348-2621.

Appendix: Department Hearing Conversation Program Template

USCG 108 - GUIDELINES FOR FIELDWORK

Last Update: 03/20/02

PURPOSE

To provide guidelines for practical work for research or teaching, conducted outside of the classroom setting and at premises that are not under the University's control.

SCOPE

Practical research or academic activities carried out under the authority of the University at locations off campus or outdoors.

GUIDELINES

Department heads, supervisors, instructors, graduate assistants, and graduate and undergraduate students involved in independent study and research should be adequately informed of hazards known to be associated with field work, and should be adequately prepared/trained to minimize the risk from these hazards.

- Conducting the Risk Assessment
- Risk assessment occurs both at the planning stage of a project and, often repeatedly, during its execution.
- Some specific risks inherent in the site of fieldwork are listed in Attachment # 1.
- Identify foreseeable hazards.
- Assess the actual risks that these hazards present (see Form 1).
- Take appropriate action to reduce risks to acceptable levels.

Preparation for Safe Fieldwork

- Many preparations are specific to conditions of the fieldwork site. Consult your supervisor and the reference list on attachment #2.
- The safety procedures selected must be based on the type of fieldwork and the working environment.
- Pay particular attention to the need to leave an itinerary with a responsible individual, especially if you are working alone. The Department of Environmental Health & Safety, Insurance & Emergency Management Services recommends use of the "buddy system."

The responsibility for safety in the field rests primarily upon the persons who directly supervise and carry out the activities on location. Such persons are expected to exercise good judgment at all times and must take all reasonable care to protect the personal health and safety of participants.

Useful References:

- General books on fieldwork safety
- Institute of Biology 1990 Safety in Biological Fieldwork.
- Committee of Heads of University Geoscience Departments 1995 Safety in geoscience fieldwork

- Natural Environmental Research Council 1993 Guidance note on fieldwork.
- Winser, S. & William, N. (eds) (annual) Expedition planners' handbook and directory. Royal Geographical Society.
- Webb, M., Scott, R. & Beale, P. 1997 First-aid manual. Dorling Kindersley.
- Royal Life Saving Association 1989 Saving life

For more information regarding this guideline, contact the Department of Environmental Health and Safety at (305) 348-2621.

USCG 108A - RISKS INHERENT TO FIELDWORK – ATTACHMENT #1

(Please note that this list is not exhaustive. Hazards will vary for each type of activity)

PHYSICAL HAZARDS

- Extreme & unpredictable weather
- Heat, humidity and sunstroke
- Remoteness & isolation
- Caves, sinkholes, marshes & quicksand
- Forests – dense vegetation
- Fresh/brackish & salt water levels of various depths
- Forest fires & smoke
- Rocky and uneven surfaces

BIOLOGICAL HAZARDS

- Venomous or aggressive animals
- Poisonous, irritant plants
- Pathogenic micro-organisms
- Local epidemics

CHEMICAL HAZARDS

- Agrochemicals, pesticides
- Dusts and air pollution
- Chemically contaminated land and bodies of water

MAN-MADE HAZARDS

- Air, road and rail traffic conditions/ interruptions
- Machinery, vehicle operation failures
- Power lines, pipelines failure/releases/ disturbance
- Electrical equipment malfunctions/shock
- Unsecured buildings
- Attack on person or property - crime
- Terrorism and civil disturbances

HAZARDS TO ENVIRONMENT

- Pollution
- Disturbance of ecosystems

NATURAL DISASTERS

- Storms & flash floods
- Earthquakes
- Tornadoes
- Lightning

OTHER

- Nuisance odors
- Allergens
- Food & water quality
- Limited access to medical care

USCG 108B - SAFETY PREPARATION FOR FIELDWORK – ATTACHMENT #2

ACCESS

- Travel arrangements (land, water, air) – Plan for redundancy
- Permission/permits/license/insurance/bonds for access to sites – Allow for lead time
- Availability of emergency assistance – Plan for independent response and recovery
- Accommodation – Be prepared to “rough it” if necessary
- Communication – Plan for redundancy

HEALTH AND FITNESS

- Medical fitness check-up – May be required
- Vaccination & prophylaxis – May be required
- Acclimatization – May be required

EQUIPMENT

- Safety clothing, e.g. hard hat, gloves
- First-aid kit and sterile pack
- Survival kit, e.g. whistle, glow stick, cell phone
- Emergency food and drink
- Navigation aids, maps, GPS, compass
- Special gear, e.g. rope, lifejacket

TRAINING

- Navigation
- First-aid
- Language and cultural Norm Orientation
- Specific skills improvement - e.g. climbing

USCG 108C - RISK ASSESSMENT FOR FIELDWORK FORM

	Hazard (e.g. Infectious materials)	Risk (e.g. Exposure to human blood and body fluids)	Risk Control (e.g. Training, Hepatitis B vaccination, PPE & Universal Precautions)
1.			
2.			
3.			
4.			
5.			

USCG 109 - FOOD SAFETY

Last Update: 09/12/02

PURPOSE

To prevent illness likely to result from the improper management and preparation of food.

SCOPE

The Department of Environmental Health & Safety advocates that all event planners apply these guidelines in the storage and preparation of food. These are minimum requirements only.

GUIDELINES

1. Buying and Transporting

- a. Inspect all food and look for problems such as damaged packages, expiration dates, damaged fruit and vegetables, and meat that may have been refrigerated improperly.
- b. Do not buy meats that have 'freezer burns' i.e. if it looks "dried out" in any portion of the meat.
- c. Do not buy perishable foods too far in advance of the date to be used. Always check for the expiration date and make sure it is indicated at least 3 days after date to be served.
- d. Do not keep foods that are meant to be kept cold or frozen at room temperature.
- e. When buying cold or frozen foods, be sure to refrigerate within 2 hours:
 - i. **DO NOT LEAVE IN VEHICLES IN THE HOT FLORIDA SUN.** If other items are required purchase perishables last.
 - ii. Organize deliveries or bring food to the area when you are about to use it, not before.

2. Food Storage

- a. Store food at the appropriate temperatures. Keep cold foods at or below 5 degrees C and hot foods at or above 60 degrees C.
- b. Do not over stock the refrigerator. Cool air must circulate to keep food safe.
- c. Protect food at all times from contamination, and use suitable containers that are leak-proof.
- d. Always stack cooked food and ready to eat food above raw food in order to avoid any liquids from raw foods draining onto other foods.
- e. Foods with strong odors should be properly and securely wrapped. Avoid storing such foods for long periods near foods such as milks and creams, which are susceptible to tainting.
- f. Throw out food that shows signs of spoilage (e.g. offensive odor, growth of fungus.)

RECOMMENDED REFRIGERATION STORAGE TEMPERATURES		
FOOD	STORAGE TEMPERATURE (DEGREES C)	SHELF LIFE
Seafood	0-3	3 days
Meat	0-3	3-5 days
Minced meat	0-3	2-3 days
Poultry	0-3	3 days
Cured meat	0-3	2-3 weeks
Fruit juices	0-7	7-14 days
Milk	1-7	5-7 days
Cream	1-7	5 days
Butter	0-7	8 weeks
Cheese	0-7	Variable (1-3 months)
Margarine	2-7	Variable (6 months)
Oil & Fat	2-7	Variable (6 months)

3. Food Preparation

- a. Keep all food preparation areas, appliances and utensils clean, i.e. wash and wipe with warm soap water before and after use.
- b. Use separate cutting boards for raw meats. Wash the board with warm and soap water after use with raw meats, poultry and seafood.
- c. Always keep in mind the quantity of food to be prepared. DO NOT prepare so much that there will be a lot left out/over for long periods of time, which would invite the temptation to reuse, or that it will be wasted.
- d. Ensure that all foods that are served raw are washed thoroughly.
- e. Never defrost food at room temperature, defrost in the refrigerator, under cold running water, or in the microwave. NEVER REFREEZE THAWED FOOD.
- f. Keep cooked foods separate from raw meats
- g. Cook and reheat food evenly at temperatures above 60 degrees C.

4. Food Handling

- a. The practice of good personal hygiene is essential in ensuring that food is not contaminated with food poisoning or food spoilage bacteria. Some food poisoning bacteria/germs are commonly found on the skin of healthy individuals, therefore scratching the head and face or any body part can result in bacteria being transferred by the hands onto the food. Harmful bacteria can also be transferred from one food type to another.
- b. To prevent contamination, every person in the food handling area, even if not actively handling food, should be careful of their own personal hygiene and cleanliness.
- c. Hand washing is vital in helping to promote wellness and good hygiene, as well as to prevent the spread of disease.
- d. Hands should be kept as germ free as possible, and should be washed:

- **Before:**
 - Preparing food, handling food, eating food.
- **After:**
 - Handling money.
 - Handling raw food.
 - Using the bathroom.
 - Handling soiled or contaminated material e.g. garbage, garbage containers etc.
 - Using a handkerchief or nasal tissue.
 - Touching ears, nose, mouth, hair, or other parts of the body.
 - Smoking.
 - Every break or,
 - Simply whenever doubt exists regarding the need for hand washing.

e. Hand Washing Technique

Step 1: Use warm running water.

Step 2: Use enough soap.

Step 3: Use enough friction.

Step 4: Do not rush the process.

Step 5: Rinse well.

Step 6: Dry hands thoroughly with disposable paper towel or under air dryer.

Step 7: Turn off faucet with paper towel.

f. Injuries and Diseases

- i. Food handlers should not work if they are suffering from gastroenteritis or other related health conditions that are likely to be spread through handling food.
- ii. If food handlers have open cuts or wounds on their hands they must not handle food or food preparation equipment, unless the injury is completely protected by a waterproof bandage. Disposable gloves should be worn over bandages on hands. Colored bandages should be used so that they are easily seen if they fall off. Disposable gloves and bandages should be changed regularly.

g. Hair and Jewelry

- i. Long hair should be tied back or covered so that it cannot contaminate the food.
- ii. Jewelry should be limited to avoid stones and small pieces of metal falling into food and contaminating the food.
- iii. Fingernails should be kept short, clean and nail polish free. Gloves should be worn, whenever dealing with unpackaged foods.

h. Protective Clothing

- i. Protective clothing is worn to protect food from the risk of contamination, and to keep clothes clean. Therefore suitable, clean protective clothing should be worn when handling unwrapped food, or when cooking. This includes the use of disposable aprons and gloves.

Note: At no time is money and food to be handled by the same person, when foods are being sold.

i. Serving and Disposing

- i. Keep ALL garnishes such as mayonnaise, salad dressing, mustard and relish on ice, unless they are in individual packets intended for use in this manner.
- ii. DO NOT re-sell any food that has been transferred or previously handled by a customer unless the food is packaged in a properly enclosed and secure wrapper or bag.
- iii. Always make sure that there are enough serving utensils available; DO NOT interchange the utensils used to serve cold and hot foods or any food containing mayonnaise and or salad dressing.
- iv. Ensure that there are enough utensils and paper napkins available for customers' use.
- v. Consider using paper towels to clean up surfaces. If you do use cloth towels, wash them often in hot, soapy water.
- vi. Be sure to have garbage disposals available to properly discard used containers and any other garbage.
- vii. All garbage containers MUST be kept covered in a service area.

5. **Buffet Services, Picnics, & Other Occasions**

- a. Hot foods should be kept at 140 degrees (F) or warmer. On the buffet table you can keep hot foods hot with chafing dishes, slow cookers, and warming trays.
- b. Cold foods should be held at 40 degrees (F) or colder. Keep foods cold by nesting dishes in bowls of ice. Otherwise, uses small serving trays and replace them often.
- c. When meals are being purchased to eat at a later time, such as at a picnic, sporting event, or outdoor buffet, a cooler with ice is the practical alternative to a refrigerator. The cooler should be well insulated and packed with ice or freezer packs. Remember the 2-hour rule when food is removed from the cooler.

For more information regarding this guideline, contact the Department of Environmental Health and Safety at (305) 348-2621.

USCG 110 - FIRST AID

Last Update: 07/01/03

SCOPE

These guidelines apply to all University personnel, employees, students and visitors, who are, or may be required to provide first aid while on University premises or involved in University sponsored activities.

BACKGROUND

The Department of Environmental Health & Safety (EH&S) recommends that all university departments maintain adequately stocked first aid kits in convenient and accessible locations. The Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.151, Appendix A states that first aid kits that meet American National Standards Institute (ANSI) Standard Z308.1 must be readily available (see Attachment 1). In addition, training of employees in basic first aid and cardiopulmonary resuscitation (CPR) is encouraged. Such training, and certification as appropriate, is available through the EH&S Department. It is important to note that the delivery of first aid and CPR may present the potential for exposure to bloodborne diseases, such as AIDS and Hepatitis B and anyone who might give first aid and/or CPR should be aware of the hazards that contact with human blood and certain human body fluids may present.

Please bear in mind that for most employees, providing first aid to someone in need is a personal choice, however for other employees such as our Public Safety Officers and medical professionals at the University Health Services (Health Care and Wellness Center) providing first aid is a requirement of their job position and part of their assigned duties. EH&S maintains a Bloodborne Pathogens Exposure Control Plan which describes the procedures required to assure the protection of employees from disease-causing organisms found in human blood and certain human body fluids (see the *Bloodborne Pathogens Exposure Control Manual*).

Each University department, which performs tasks likely to create exposures for their employees, is required to maintain a department specific exposure control program and to keep this program current. OSHA requires that whenever employees are assigned to provide first aid or perform tasks that create the potential for exposure requires that specific training, personal protective equipment and vaccinations are provided, and that specific record keeping and procedures are implemented. Therefore, the purpose of this University Safety Compliance Guide (USCG) is to define the types of first aid providers at FIU, to explain basic exposure control procedures and to identify the minimum first aid kit supplies that should be available according to ANSI Standard Z308.1.

DEFINITIONS

Good Samaritan

Within the context of this USCG, a "Good Samaritan" is a person who volunteers assistance, as a personal choice, to a person in medical need. This assistance may or may not involve potential contact with human blood or body fluids. EH&S highly recommends that all individuals who register for First Aid and CPR courses also complete the "online anytime" Bloodborne Pathogens

Exposure Control Training Program, which is available at www.fiu.edu/~ehs/onltrain/home.htm. This online training program provides information regarding the hazards involved in exposure and contact with human blood and certain body fluids, and how to protect oneself from such bloodborne diseases.

First Responder

A "First Responder" is an employee who, as a requirement of his/her job position and assigned duties, is required to provide first aid and/or CPR to persons in medical need. The First Responder is certified in first aid and CPR or other medical field of practice and provides medical assistance until professional medical care can be provided. First responders include University athletic training staff, Public Safety Officers, medical care providers at University Health Services, Environmental Health & Safety personnel and select Facilities Maintenance personnel whose job tasks require them to service or maintain locations that may be contaminated with blood or body fluids. First Responders are required to participate in the blood borne pathogens program required by the OSHA Blood borne Pathogens regulations (OSHA Standard 29 CFR 1910.1030). Note that if broken skin, eyes or the mouth makes contact with human blood or potentially infectious body fluids you must immediately wash contaminated skin with soap and water and flush eyes and mouth. Then, notify your supervisor and the Department of Human Resources at 348-3273 to arrange a post-exposure evaluation.

GUIDELINES

First Aid Kit Requirements

The content for industrial first aid kits must comply with the standards set by the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens regulations (OSHA Standard 29 CFR 1910.1030) and the American National Standards Institute (ANSI) Standard Z308.1. The "First Responder" kit contains items that will provide blood exposure protection and is intended for use by employees who have first aid responsibilities under the bloodborne pathogens regulations. The "Good Samaritan" first aid kits do not contain blood exposure protection items, and are intended for self-use and for use by individuals who make a personal choice to volunteer assistance.

First aid kits are available from the University Central Stores Department at 348-2171.

Selecting the Appropriate Kit

Determine whether your operations include any activities that are hazardous, contain hazardous materials, sharp objects, or obvious things that could produce cuts, punctures, or any other need for first aid. Based on this evaluation, obtain the appropriate first aid kit and locate it in a site accessible and known to all employees. Provide appropriate training and information to employees so they can successfully utilize the first aid kit.

If your evaluation leads you to provide a "Good Samaritan" first aid kit, simple instructions will be sufficient. However, if your evaluation leads you to provide the "First Responder" first aid kit, more information and instruction are indicated and include the following:

- Instructions for one or more persons in the fundamentals of basic first aid.
- Instructions for one or more persons in CPR and accident management.

- Instructions for one or more persons in the protective measures required to prevent bloodborne pathogens exposure.

Further information and assistance can be obtained from the Department of Environmental Health & Safety at (305) 348-2621.

USCG 110A - FIRST AID KIT CONTENTS

Last Update: 07/01/03

Kit Contents:

All university departments should maintain adequate first aid kits in convenient and accessible locations. First aid kits and refill items can be purchased from University Central Stores. Kits may contain additional supplies. Individual items should be replenished as they soon as they become depleted. Supervisors should provide a log for use of first kits in order to track the types of injuries that are most common.

MINIMUM CONTENTS	SMALL GOOD SAMARITAN KIT	LARGE GOOD SAMARITAN KIT	FIRST RESPONDER KIT
Absorbent Compress	1	1	1
Adhesive Bandages (1" x 3")	16	20	20
Adhesive Tape (3/8" x 5 yd.)	2 rolls (1/2" x 2 1/2 yd.)	1 roll (1/2" x 5 yd.)	1 roll (1/2" x 5 yd.)
Antiseptic (0.5 g applications)	10 wipes	10 wipes	10 wipes
Burn Treatment (0.5 g applications)	6	6	6
Sterile Pads (3" x 3")	4	10	10
Triangular Bandage (40"x40"x56")	1	1	1
Medical Exam Gloves (large)	2 pair	2 pair	3 pair
Waste Bag (6" x 8" plastic Ziploc)	---	---	1
Biohazard Label (1" x 3")	---	---	1
CPR Microshield-Plus Mask	---	---	1
Ice Pack	2	2	6

Some operations may require more extensive first aid kits than recommended here. In those cases, please contact Environmental Health and Safety at (305) 348-2621 and request the **COMPREHENSIVE FIRST AID KIT CONTENT SHEET** prepared by the Medical Director of University Health Services, Dr. Robert Dollinger.

Please remember that "first aid" is just that and should not be substituted for appropriate medical care by a medical care practitioner.

USCG 111 - Office Safety

Last Update: 02/09/04

PURPOSE

To identify some of the more frequent hazards present in the office environment and advise employees on how to avoid and/or eliminate these hazards.

SCOPE

University-wide

GUIDELINES

1. Filing Cabinets & Desks

- Always load the bottom drawers of the cabinet first. Avoid making the cabinet top heavy by placing heavier items in bottom drawer.
- Only open one drawer at a time. When possible, request lateral file cabinets which prohibit opening multiple drawers.
- Close desk drawers/file cabinets when not in use.
- Never sit, stand or kneel on desks, lateral file cabinets or other office furniture.
- Be cautious around protruding locking bars.
- Ensure there is no clutter under desks.
- Do not store items on top of cabinets.
- Do not attempt to move or repair your own office furniture or equipment. Call Work Management at x74600 for UP & EAS and x65565 for BBC for assistance.

2. Chemical Storage

- Hazardous chemicals are not allowed to be brought in nor stored in an office environment.
- Ensure that appropriate containers (copier toner, etc.) are clearly marked.

3. Lifting

- Have a good, stable surface.
- Keep feet apart, at least as wide as shoulders.
- Keep feet pointed in the direction of the push/pull/lift.
- Move feet in the direction of the push/pull/lift to avoid twisting your trunk (back).
- Bend knees as needed to keep back in a bowed position.
- Do not lock knees straight.
- Keep back bowed in and rear out before push/pull/lift, and throughout.
- Do not twist back - pivot body so shoulders and hips face same direction.
- Keep the weight of the object in as close to the body as possible while lifting.
- Push with legs; keep back bowed in and rear sticking out.

4. Ergonomics

Complete the “Online Anytime” Office Ergonomics training (to register go to www.fiu.edu/~ehs) and perform the following ergonomics self assessment:

- Adjust your chair so that your feet are resting comfortably on the floor or on a footrest.
- Support your lower back by adjusting the backrest or adding a pad.
- Adjust the seat pan so it does not compress the back of your thighs.
- Position your keyboard so that your wrists are in a straight/neutral position.
- Keep your elbows at the same height as the keyboard and close to your body, or supported by the armrests of your chair.
- Position your mouse at the same height and location as your keyboard.
- Position the monitor so that it is directly in front of you; does not reflect glare into your eyes; and at a distance from your eyes of 18 to 24 inches.
- Take small/frequent breaks to rest your eyes and move your body.
- Try to alternate working at the computer with other tasks that do not use the same muscle groups.
- Consider the use of a headset when talking on the phone for prolonged periods of time.
- If additional lighting is desired in your cubicle, use approved lighting.

5. Hallways & Aisles

- Walk - DO NOT RUN.
- Keep eyes on path while walking.
- Be cautious when turning corners & exiting conference rooms.
- Use hallway mirrors to detect oncoming traffic.
- Walk around barricaded areas - DO NOT PULL DOWN BARRICADE TAPE!
- Stay to the right, especially when turning corners.

6. Stairwells

- Use handrails.
- Never run on the stairs.
- Avoid blocking the stairways either by stopping to talk with someone or by placing materials in the way of traffic.
- Use caution when opening doors leading to stairwells.
- Take one step at a time.

7. Surface Conditions

- Be cautious when changing surfaces to avoid slips (i.e. carpet-to-tile or mat-to-cement)
- Be aware of water collected at doorways during rainy weather.
- Use caution when walking through wet parking lots & walkways.

8. Obstacles

- Keep all pathways free of any obstacles including boxes, chairs, stacked materials, open file drawers, etc.
- Do not block means of egress (exits), electrical panels or fire extinguishers.

9. Spills

- Spills of unknown liquids that are greater than 6 inches in diameter should be reported to FIU, Public Safety
- If the spill is food and cannot be cleaned up immediately, mark spill with cones and Call Work Management at x74600 for UP & EAS and x65565 for BBC for assistance.
- All food and beverages must be placed in covered containers.

10. Wires

- Keep wires and cords out of pathways and away from feet.
- Do not route electrical, phone or computer lines across aisles or passageways.

11. Electrical

- Do not overload plugs.
- Do not unplug equipment by pulling on the electrical cord; unplug it from the outlet.
- DO NOT USE any frayed cords, broken plugs or equipment containing these defects. Remove these items from service and immediately report these to Work Management at x74600 for UP & EAS and x65565 for BBC for assistance for repair.
- Avoid the use of extension cords. Use multi-plug power strips (with circuit breaker) for multiple plugs.
- Do not connect extension cords or power strips together (daisy-chain).
- Personal heaters, coffee makers, toasters, hot plates or other electrical appliances are not allowed.
- Never interfere with lockout/tagout tags on equipment or power supplies. For questions, contact the person listed on lockout/tagout tag or Work Management at x74600 for UP & EAS and x65565 for BBC.

USCG 116 - FIRST AID RESPONSE TO MEDICAL EMERGENCIES

Last Update: 03/30/04

PURPOSE

To establish standard guidelines for response to on-campus medical emergencies.

SCOPE AND APPLICATION

University-wide

GUIDELINES

1. When an injury or illness occurs:

- a. Evaluate the situation: Use common sense.
- b. Call Public Safety Department at x75911 if you need emergency assistance. Provide the following information:
 - i. Name, if known, of the injured person.
 - ii. Your name.
 - iii. Description of what happened or what you observed.
 - iv. Gender and apparent age of the injured person.
 - v. Your location.
 - vi. A phone number where you may be reached if required.
- c. Initiate appropriate action:

Minor conditions:

- Render aid if you have been trained.
- Direct the individual to the Health Care and Wellness Center or local hospital (see attachment).
- Ask if they need assistance getting to the Health Care and Wellness Center, home or to a hospital or doctor.
- If appropriate, accompany the individual or assure another person accompanies them.
- Ask if they need assistance contacting a family member or friend.

Serious conditions: Include but are not limited to unconsciousness, difficulty breathing, choking, seizure, chest pain, serious bleeding, etc.

- Get help immediately - If alone, go to the nearest phone and dial Public Safety at x75911. (Elevator phones may be used to notify Public Safety)
- Render aid as appropriate.
- If possible, try to determine:
 - If the person has any “medical conditions”
 - If the person takes any medications
 - If the person has any allergies
- Try to remain calm and reassure the injured person as appropriate.

Employees with health conditions that may create a “crisis” should alert their supervisor and co-workers of their condition so that no time will be wasted in rendering assistance when required.

List of Local Hospitals

Name of Hospital	Address	Phone Number
Aventura Hospital	20900 Biscayne Blvd., Aventura, FL. 33180	(305) 682-7000
Baptist Hospital	8900 N. Kendall Drive, Miami, FL. 33176	(786) 596-1960
Cedars Medical Center	1400 N.W. 12 th Avenue, Miami, FL. 33136	(305) 325-5511
Coral Gables Hospital	3100 Douglas Road, Coral Gables, FL. 33134	(305) 445-8461
Deering Hospital	9333 SW 152 nd Street, Village of Palmetto Bay, FL. 33157	(305) 251-2500
HealthSouth Doctors Hospital	5000 University Drive, Coral Gables, FL. 33146	(305) 666-2111
Hialeah Hospital	651 E. 25th Street, Hialeah, FL. 33013	(305) 693-6100
Homestead Hospital	160 N.W. 13 th Street, Homestead, FL. 33030	(786) 243-8000
Jackson Health Systems	1611 N.W. 12 th Avenue, Miami, FL. 33136	(305) 325-7429
Kendall Medical Center	11750 S.W. 40 th Street, Miami, FL. 33175	(305) 223-3000
Larkin Community Hospital	7031 S.W. 62 nd Avenue, South Miami, FL. 33143	(305) 284-7500
Mercy Hospital	3663 South Miami Avenue Miami, FL. 33133	(305) 854-4400
Miami Children's Hospital	3100 S.W. 62 nd Avenue, Miami, FL. 33155	(305) 666-6511
Mount Sinai Medical Center	4300 Alton Road, Miami Beach, FL. 33140	(305) 674-2121
North Shore Medical Center	1110 N.W. 95 th Street, Miami, FL. 33150	(305) 835-6000
Palm Springs General Hospital	1475 W. 49 th Street, Hialeah, FL. 33012	(305) 558-2500
Palmetto General Hospital	2001 W. 68 th Street, Hialeah, FL. 33016	(305) 823-5000
Pan American Hospital	5959 N.W. 7 th Street, Miami, FL. 33126	(305) 264-1000
Parkway Regional Medical Center	160 N.W. 170 th Street, North Miami Beach, FL. 33169	(305) 651-1100
South Miami Hospital	6200 S.W. 73 rd Street, South Miami, FL. 33143	(305) 661-4611
South Shore Hospital	630 Alton Road, Miami Beach, FL. 33139	(305) 672-2100
V.A. Medical Center	1201 N.W. 16 th Street, Miami, FL. 33125	(305) 324-3120
Westchester General Hospital	2500 S.W. 75 th Avenue, Miami, FL. 33155	(305) 264-5252

2. Pool Accidents

In the case of a pool-related accident, the following procedures are recommended:

Serious Accidents/Life Threatening: (Unconscious, Fractures, Severe Bleeding, Rescue Breathing, Heart Attack/Stroke, Shock)

Procedures:

- a. Rescue victim and start administering appropriate first aid/CPR
- b. Assign an individual to call the Public Safety Department at 75911 – Provide the following information:
 - Name, if known of the injured person
 - Your name
 - Description of what happened or what you observed
 - Gender and apparent age of injured person
 - Your location
 - A phone number where you can be reached if required.

- c. Clear the swimming pool.
- d. Clear area around the victim.
- e. If necessary, end/suspend class.
 - i. If possible, a staff person should accompany the victim to the hospital. If this is not possible, the instructor should assure updates are requested from hospital.
- f. Call the following people as soon as possible:
 - Next of kin (parent/guardian, spouse, etc.)
- g. Carefully complete accident report form(s). Be sure to obtain the name & contact information of witnesses to the incident.
- h. Notify the Office of Media Relations, and Environmental Health & Safety as soon as possible.

Non-Life Threatening Accidents: (Sprains, strains, minor cuts, etc.)

Procedures:

- a. Persons in charge must use his/her judgment as to the severity of the accident and to notify the Public Safety Department.
- b. Perform needed first aid as required.
- c. Report/ call accident to departmental head. Call victim's next of kin (parent/guardian, spouse, etc.) if department head feels it is necessary.
- d. Complete accident report.

For further information please contact the Department of Environmental Health and Safety at (305) 348-2621.

USCG 117 - TUBERCULOSIS CONTROL PLAN

Last Update: 03/30/04

PURPOSE

The purpose of this guidance document regarding Tuberculosis is to:

1. Eliminate or minimize employee exposure to TB in the workplace
2. Comply with the CDC's guidelines
3. Establish a road map for response to suspect causes of tuberculosis in the work place.

SCOPE

University-wide

OCCUPATIONAL EXPOSURE DETERMINATION

The Occupational Health and Safety Administration (OSHA) requires employers to perform an exposure determination concerning which employees may experience occupational exposure to TB. The exposure determination is made without regard to the use of personal protective equipment (i.e. employees are considered to be exposed even if they wear personal protective equipment). The exposure determination includes all job classifications in which employees may experience occupational exposure, regardless of frequency.

In addition, the exposure determination must include a listing of job classifications in which employees may have occupational exposure. Since not all the employees in these categories would be expected to experience exposure to TB, task or procedures that would cause these employees to have occupational exposure must also be listed in order to clearly understand which employees in these categories are considered to have occupational exposure.

Job Classification

Task/Procedure

IMPLEMENTATION SCHEDULE AND METHODOLOGY

1. Compliance Methods

Engineering and work practice controls must be used to eliminate or minimize student and employee exposure. Where occupational exposure remains after implementing these controls, personal protective equipment must be used. All engineering controls must be inspected and maintained on a regular schedule.

2. Testing

Any individual who suspects that he or she has been exposed to TB should immediately visit their personal physician and notify their supervisor so that close personal contacts within the workplace can be notified.

A Mantoux skin test may be performed whenever exposure to an infectious tuberculosis case is suspected.

The FIU Health Care & Wellness Center shall administer this test for a fee, payable by the department requesting the test.

3. Mantoux Test Procedure

The Mantoux test is performed by the intradermal injection of 0.1 ml of PPD tuberculin containing 5 TU (tuberculin units) into either of the forearm. This injection is made with a disposable tuberculin syringe. The injection is made just beneath the surface of the skin.

If the skin test is positive, the employee will be referred to a physician and be required to obtain an x-ray.

If the chest x-ray is suggestive of active tuberculosis, the employee will be placed on leave until subsequent testing shows that the employee is not infectious as verified by the employee's personal physician. A medical release to return to work will be required

4. Classification of the tuberculin reaction

A tuberculin reaction of 10 mm or more is classified as positive in persons.

5. Respiratory Protection

The Center for Disease Control Guidelines recommend and OSHA requires employees to wear a High Efficiency Particulate Respirator (HEPA) in the following circumstances:

- When employees enter rooms occupied by individuals who are suspected to be infected with, or confirmed to be infected with tuberculosis.
- When employees perform high hazard procedures on individuals who are suspected to be infected with, or confirmed to be infected with tuberculosis. Examples of high hazard procedures include:
 - Aerosolized medication (e.g. pentamidine) treatment
 - Bronchoscopy
 - Sputum induction
 - Endotracheal intubation and suctioning procedures

For further information please contact the Department of Environmental Health & Safety, Insurance & Emergency Management Services at 348-2621, or visit the Center for Disease Control Website at <http://www.cdc.gov/nchstp/tb/>

USCG 118 - CORRIDOR UTILIZATION

Last Update: 05/10/04

PURPOSE

To ensure that corridors provide for:

- a readily apparent, safe and adequate means by which building occupants may exit a facility in the event of a fire or other serious emergency;
- ready access and use by emergency personnel;
- the safe movement of people during normal daily use of the building; and
- the safe transportation of goods and materials

SCOPE

This guidance document applies to all buildings with research and teaching labs. The corridors for all other buildings shall conform to the requirements of the NFPA Life Safety Code.

GUIDELINES

These guidelines prohibit the use of any corridor for storage of construction material, equipment scheduled for installation, supplies pending movement into labs or offices, surplus materials or similar items which could jeopardize the safety of area occupants.

- Corridors required for emergency evacuation in research buildings shall be maintain at minimum 4 ft (48") clear and unobstructed width. Occupants shall maintain the entire width free of any materials or equipment.
- Storage is NOT allowed in:
 - horizontal exits
 - stairwells
 - areas of refuge
 - elevator lobbies
- Storage shall not block laboratory or office doors. An adequate clear space must be provided on one or both sides of all doorways (an 18-inch clear space on the latch side of the door jamb or, alternatively, a 12-inch clear space on each side of the door jamb). This "clear space" is primarily intended to provide safer and greater room access to response personnel and equipment in the event of an emergency. Door must swing open at least 90°.
- All exit doors, including stairwell doors, shall be clear of storage to a distance at least 6ft (72") on either side of the door.
- All emergency equipment; including safety showers, eyewashes, sprinklers and fire extinguishers, must be maintained with full and unobstructed access at all times.
- The following items are prohibited in the corridors:
 - Flammable or combustible liquids.
 - Hazardous chemicals.

- Compressed gas cylinders - all sizes.
 - Biological agents at or above Biosafety Level 2.
 - Equipment operating under either positive or negative pressure, high temperature or high voltage.
 - Equipment with exposed machine parts (e.g., unguarded belts, pulleys or gears).
 - Live animals.
 - Equipment or storage cabinets with glass fronts or panels; including refrigerators.
 - Incubators, etc.
- Although liquefied gases (e.g., cryogenic liquids) often present equal or greater hazards than compressed gases, the typical equipment using liquid nitrogen as a freezer supply or serving as a refrigerator backup is considered to represent minimal risk and may be permitted if properly located in the corridor.
 - The use or storage of radioactive materials in corridors is specifically and strictly prohibited at all times.
 - Materials for construction projects may be stored temporarily in adjacent corridor during the workday, as long as the minimum prescribed clear corridor width is maintained. Construction materials shall not remain in the corridor overnight. Equipment and supplies shall not, under any circumstances, be stored in stairwells.
 - Equipment and supplies cannot be abandoned in corridors, horizontal exits, designated areas of refuge or stairwells. Dispose of surplus property by contacting the Property Control Department at (305) 348-2167

Please contact the Department of Environmental Health & Safety at 348-2621 for additional information or visit EH&S Construction page at <http://www.fiu.edu/~ehs/const/home.htm>

USCG 119 – HAZARD COMMUNICATION (HAZCOM)

Last Update: 02/07/06

PURPOSE

To assure that all students and employees of Florida International University are afforded the opportunity to learn about chemical hazards in their work environment.

SCOPE

University-Wide

GUIDELINES

FIU employees who is or may be exposed to a hazardous chemical should be provided with information regarding the requirements of the OSHA Hazard Communication Standard.

Such information should at minimum include the names of hazardous chemicals, and the locations where additional information, including but not limited to MSDS's, schedule or resource for training and the locations of any written procedure involving the use of these chemicals.

Additionally, each such [employee should be trained](#) as to detection methods, physical and health hazards of, protection methods for, as well as labeling and MSDS provisions for such hazardous chemicals.

Every employee should be informed of the Hazard Communication Compliance requirements and should be provided with the appropriate training.

New employees are required to receive information and training at the time they are assigned to work in an area which may expose them to a hazardous chemical.

Whenever a new hazard is introduced into the workplace, all affected employees should be trained as to that hazard.

Employees who may be exposed to hazardous chemicals when conducting non-routine tasks should be informed of the risks. This also applies to employees who may be exposed to construction related activity such as painting, varnishing, roof repairs, etc.

Information and training provided to employees for non-routine tasks should include instructions on administrative as well as engineering controls and contact numbers of emergency notification. Where appropriate, the use of personal protective equipment should be considered, but only as a last option.

Supervisors who provide training to their own team may consult with EH&S, request EH&S staff participation, request use of any materials in the "Free Audio-visual library, or copies or any hard copy documents. Where time permits, EH&S will develop customized PowerPoint presentations, up to 15 slides for use by departments University-wide.

Written records must be maintained for all departmental HAZCOM training. Such records should include the names of persons trained, their signatures, the dates of the training, and an outline of the training. Persons who are trained must place their signatures on these records to indicate that they have received the training. Each department is responsible for maintaining records and having them available for review as needed.

Employee information and training should include, as a minimum, the following elements:

1. Information of the requirements of the OSHA Hazard Communication Standard, which includes availability of information, exemptions from the standard, interpretation of key definitions, and how a chemical is deemed hazardous.
2. The details of the FIU Written Hazard Communication Program including an explanation of labeling systems and Material Safety Data Sheets and where on campus employees can obtain and use the appropriate hazard information.
3. Information as to the hazardous chemicals within the work area and where they are located.
4. Information as to the hazards of specific chemicals to which employees are exposed. This may be done either individually or by class of chemical hazard. Information on such hazards, both health and physical, should be taken from the MSDS for that chemical or class of chemicals.
5. Information as to how employees should detect the presence of or release of a hazardous chemical routinely used in the workplace and how they can protect themselves from exposure. This must include a discussion of all safety supplies and equipment recommended on MSDS and when such equipment is to be used. At the conclusion of any information and training session, an opportunity for questions must be provided. All pertinent questions must be answered.
6. If an answer is not known, the trainer should obtain the answer either from other knowledgeable individuals in the department, laboratory, or work area, the EH&S office (305) 348-2621 or the chemical manufacturer. Once the answer is obtained, it should immediately be conveyed to the employee who expressed interest and a note made to file that the response was provided and when.

For more information regarding these guidelines, contact the Department of Environmental Health and Safety at (305) 348-2621

USCG 120 – OCCUPATIONAL HEALTH & SAFETY TRAINING GUIDELINES: **GENERAL SAFETY**

Last Update: 02/08/06

PURPOSE

To provide a single reference source for the University community regarding training programs mandated for employees (and students) based on job, assignment, or work place exposure.

SCOPE

All University employees, volunteers and, where applicable, as a condition of contract or service to the University.

BACKGROUND

Many standards promulgated by the Occupational Safety and Health Administration (OSHA) explicitly require employee training in the safety and health aspects of their job.

Other OSHA standards make it the employer's responsibility to limit certain job assignments to employees who are "certified," "competent," or "qualified" - meaning that they have had special previous training, in or out of the workplace.

OSHA also requires the following:

Training must have established goals and objectives regarding what is to be accomplished. Subsequent to the training, an evaluation should be conducted to verify that employees understood the subjects presented or acquired the required skills.

If the established goals and objectives of the training program were not achieved as expected, the training program must be revised to make it more effective, conducted more frequently, or some combination of these.

Supervisors must keep safety and health training records to provide evidence of good faith and compliance with OSHA standards. Documentation can also supply an answer to one of the first questions an accident investigator will ask: "Was the injured employee trained to do the job?"

INDEX OF TRAINING REQUIREMENTS

GENERAL INDUSTRY: 29 CFR Part 1910

Subpart E: Means of Egress

Personal Protective Equipment

Employee Emergency Plans and Fire Plans

Subpart F: Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms

Operations-Training

Care and use Appendix C, Section 1

Subpart G: Occupational Health and Environmental Control

Personal Protection

Inspection, Maintenance, and Installation

Hearing Protection

Training Program

Ionizing Radiation

Subpart H: General Industry Training Requirements

Flammable and Combustible Liquids

Explosives and Blasting Agents

Bulk Delivery and Mixing Vehicles

Storage and Handling of Liquefied Petroleum Gases

Process Safety Management of Highly Hazardous Chemicals

Contract Employer Responsibilities

Mechanical Integrity

Hazardous Waste Operations and Emergency Response

New Technology Programs

Subpart I: Personal Protective Equipment

Respiratory Protection

Subpart J: General Environmental Controls

Temporary Labor Camps

Specifications for Accident Prevention Signs and Tags

Permit Required Confined Spaces

Medical Services and First Aid

The Control of Hazardous Energy (Lockout/Tagout)

Lockout or Tagout Devices Removed

Outside Personnel

Subpart K: Medical and First Aid

Medical Services and First Aid

Subpart L: Fire Protection

Fire Protection

Fire Brigades

Training and Education

Portable Fire Extinguishers

Fixed Extinguishing Systems

Fire Detection Systems

Subpart N: Materials Handling and Storage

Employee Alarm Systems
Servicing of Multi-Piece and Single-Piece Rim Wheels
Powered Industrial Trucks
Overhead Cranes Moving the Load
Crawler Locomotive and Truck Cranes

Subpart O: Machinery and Machine Guarding

Mechanical Power Presses
Mechanical Powers Presses Instruction to Operators
Training of Maintenance Personnel
Operator Training
Forging Machines

Subpart Q: Welding, Cutting, and Brazing

General Requirements
Oxygen-Fuel Gas Welding and Cutting
Arc Welding and Cutting
Resistance Welding

Subpart R: Special Industries

(As may apply to instruction or research involving these activities)

Pulp, Paper, and Paperboard Mills
Laundry Machinery and Operating Rules
Sawmills
Telecommunications
Derrick Trucks
Cable Fault Locating
Guarding Manholes
Joint Power and Telecommunication Manholes
Tree Trimming-Electrical Hazards
Electric Power Generation, Transmission, and Distribution
Grain Handling Facilities
Entry Into Bins, Silos, and Tanks

Contractors

Subpart S: Electrical Safety-Related Work Practices

Subpart T: Diving Operations

Subpart W: Ergonomics

Subpart Z: Toxic and Hazardous Substances

Asbestos
4-Nitrobiphenyl
Alpha-Naphthylamine
Methyl Chloromethyl Ether
3, 3'-Dichlorobenzidine (and its Salts)

Bis-Chloromethyl Ether
Beta-Naphthylamine
Benzidine
4-Aminodiphenyl
Ethyleneimine
Beta-Propiolactone
2-Acetylaminofluorene
4-Dimethylaminoazobenzene
N-Nitrosodimethylamine
Vinyl Chloride
Inorganic Arsenic
Lead
Cadmium
Benzene
Coke Oven Emissions
Bloodborne Pathogens
Cotton Dust
1, 2-Dibromo-3-Chloropropane
Acrylonitrile (Vinyl Cyanide)
Ethylene Oxide
Formaldehyde
4, 4' Methyleneedianiline
Hazard Communication
Occupational Exposure to Hazardous
Chemicals in Laboratories

For more information regarding these guidelines, contact the Department of Environmental Health and Safety at (305) 348-2621. Students and employees may also visit the EH&S website to review scheduled training programs and other training resources.

D USCG 121 - Walking & Working Surfaces

Last Update: 11/13/06

PURPOSE

To provide appropriate guidelines for the safe use and maintenance of walking and working surfaces on University premises.

AUTHORITY

OSHA - 29 CFR 1910.21 - 23

SCOPE

All facilities and grounds of premises owned and operated by Florida International University

GUIDELINES

1. Definitions

- a. Floor hole: an opening measuring less than 12 inches but more than 1 inch in its least dimension, in any floor, platform, pavement, or yard, through which materials may fall; such as a belt hole, pipe opening, or slot opening.
- b. Floor opening: an opening measuring 12 inches or more in its least dimension, in any floor, platform, pavement, or yard through which persons may fall; such as a hatchway, stair or ladder opening, pit, or large manhole. Floor openings occupied by elevators, dumb waiters, conveyors, machinery, or containers are excluded.
- c. Handrail: a single bar or pipe supported on brackets from a wall or partition, as on a stairway or ramp, to furnish persons with a handhold in case of tripping.
- d. Platform: a working space elevated above the surrounding floor or ground for the operation of machinery and equipment; such as a balcony or platform.
- e. Runway: a passageway elevated above the surrounding floor or ground level, such as a foot-walk along shafting or a walkway between buildings.
- f. Standard railing: a vertical barrier erected along exposed edges of a floor opening, wall opening, ramp, platform, or runway to prevent falls.
- g. Standard strength and construction: any construction of railings, covers, or other guards that meet the requirements of 29 CFR 1910.23.
- h. Stair railing: a vertical barrier erected along exposed sides of a stairway to prevent falls.
- i. Toeboard: a vertical barrier at floor level erected along exposed edges of a floor opening, wall opening, platform, runway, or ramp to prevent materials from falling.
- j. Wall hole: an opening less than 30 inches but more than 1 inch high, of unrestricted width, in any wall or partition; such as a ventilation hole or drainage scupper.
- k. Wall opening: an opening at least 30 inches high and 18 inches wide, in any wall or partition, through which persons may fall; such as a yard-arm doorway or chute opening.

2. General Standards

- a. All offices, work stations, work areas, passageways, storerooms, restrooms, and service rooms shall be kept clean, orderly, sanitary, and free of known hazards.
- b. The floor of every workroom shall be maintained in a clean and, so far as possible, a dry condition. Where wet processes are used, drainage shall be maintained, and false floors, platforms, mats, or other dry standing places will be provided where practicable.
- c. To facilitate cleaning, every floor, working place, and passageway shall be kept free from protruding nails, splinters, holes, or loose boards or other hindrances that would prevent efficient maintenance.
- d. Sufficient illumination will be provided in all areas at all times. Employees discovering lighting deficiencies will report them to Facilities Work Management Center (305) 348-4600 for correction.
- e. All employees are responsible for maintaining their immediate work areas in a clean and orderly manner, and for notifying maintenance of conditions beyond their control.
- f. Supervisors will ensure that machines and equipment under their control are maintained in a clean and orderly manner. Crowding should be avoided where ever possible.
- g. All employees are responsible to ensure that aisles are kept clean, free of material, finished parts, scrap, or any type of debris.
- h. Maintenance will ensure that all floor spaces are maintained in a clean and orderly manner.
- i. The Facilities Management Department will ensure that all wall spaces are properly painted, and maintained in a clean and orderly manner. Postings will be confined to bulletin boards and other appropriate areas.
- j. Appropriate procedures will be followed based on the type of storage facility. Please consult the Fire Prevention Officer at (305) 348-2621, if you have questions regarding storage and Life Safety Code.
- k. Departments such as Public Safety, Athletics and Facilities Management, that provide lockers for employees to keep a change of clothing and personal belongings will keep locker areas clean and orderly. Insecure belongings will be turned over to the Public Safety Department at (305)348-2626 for disposition.
- l. Emergency exit doors will be kept free of any obstacles at all times. Any employee finding an emergency door blocked is required to immediately report

the condition to the Fire Prevention Officer at (305)348-2621. The Fire Prevention Officer will follow up for correction. Exit lights and signs will also be maintained in proper condition at all times and immediately reported if deficient.

- m. Interior spills will be contained immediately by any employee trained in spill containment and reported to the area supervisor who will determine the need to contact the University Industrial Hygienist at (305)348-2621, if hazardous materials are involved.
 - n. Exterior spills will be contained immediately by any employee trained in spill containment and reported to the area supervisor who will determine the need to contact the Environmental Compliance Officer at (305)348-2621 if hazardous materials are involved.
- 3. Aisles and passageways.**
- a. Where mechanical handling equipment is used, sufficient safe clearances will be maintained for aisles, at loading docks, through doorways and wherever turns or passage must be made. Aisles and passageways shall be kept clear and in good repairs, with no obstruction across or in aisles that could create a hazard.
 - b. Permanent aisles and passageways shall be appropriately marked.

5. Covers and guardrails.

- a. Covers and/or guardrails shall be provided to protect personnel from open pits, tanks, vats, ditches, etc.
- b. Work areas under supervisory control will be properly guarded, covered, cordoned off, or marked to prevent injury. Supervisors will ensure the following are properly secured and reported to Facilities Work Management at (305) 348-4600 if deficient:
 - i. Stairways unguarded/containing holes.
 - ii. Ladderway floor openings - unguarded.
 - iii. Hatchway and chute floor opening - unguarded.
 - iv. Skylight floor openings - unguarded.
 - v. Pit and trapdoor floor openings- unguarded.
 - vi. Manhole floor openings - unguarded.
 - vii. Temporary floor openings - unguarded.
 - viii. Floor holes/openings - unguarded.

- ix. Chute wall openings - unprotected.
- x. Window wall openings - unprotected.
- xi. Temporary wall openings - unprotected.
- xii. Open-sided floor or platforms - unguarded.
- xiii. Catwalks - unguarded

6. Floor loading protection.

- a. When loads or single items exceeding 350lbs are to be placed on floor areas or roofing structures, the safe load capacity must be determined by consulting with the building's Facilities Management Project Manager. If research equipment is involved, Risk Management and Environmental Health & Safety must be notified.
- b. Safe floor loading capacities will be marked on plates of approved design and securely affixed in a conspicuous place in each space to which they relate. The responsibility is of the Facilities Management Department.

7. Guarding floor and wall openings, and holes.

- a. Protection for floor openings.
 - i. Stairway floor openings shall be guarded by a standard railing constructed in accordance with 29 CFR 1910.23, paragraph (e). The railing shall be on all exposed sides (except at entrances to stairways). For infrequently used stairways where traffic across the opening prevents the use of a fixed standard railing (as when located in aisle spaces, etc.), the guard shall consist of a hinged floor opening cover of standard strength and construction and removable standard railings on all exposed sides (except at entrance to stairway).
 - ii. Ladderway floor openings or platforms shall be guarded by a standard railing with toeboard on all exposed sides (except at entrance to opening), with the passage through the railing provided with a swinging gate or offset so that a person cannot walk directly into the opening.
 - iii. Hatchway and chute floor opening shall be guarded by one of the following:
 - 1. Hinged floor opening cover of standard strength and construction equipped with railings or permanently attached so as to leave only one exposed side. When the opening is not in use, the cover shall

be closed or the exposed side shall be guarded at both top and intermediate positions by removable standard railings.

2. A removable railing with toeboard on no more than two sides of the opening and fixed standard railings with toeboards on all other exposed sides. The removable railings shall be kept in place when the opening is not in use. Where operating conditions necessitate the feeding of material into any hatchway or chute opening, protection shall be provided to prevent a person from falling through the opening.
- iv. Skylight floor openings and holes shall be guarded by a standard skylight screen or a fixed standard railing on all exposed sides.
 1. Skylight screens should be constructed and mounted such that they can withstand a load of at least 200 pounds applied perpendicularly at any one area on the screen. In addition, under ordinary loads or impacts, they will not deflect downward sufficiently to break the glass below them. The construction should be of grillwork with openings not more than 4 inches long or of slatwork with openings not more than 2 inches wide with length unrestricted.
 - v. In frequently used pit and trapdoor floor openings shall be guarded by a floor opening cover of standard strength and construction. When the cover is not in place, the pit or trap opening must be constantly attended by someone or protected on all exposed sides by removable standard railings.
 - vi. Manhole floor openings shall be guarded by a standard manhole cover which need not be hinged in place. When the cover is not in place, the manhole opening must be constantly attended by someone or protected by removable standard railings.
 - vii. Temporary floor openings shall have standard railings, or shall be constantly attended by someone.
 - viii. Floor or surface holes (those that contain removable bollards) into which persons can accidentally walk shall be guarded by either:
 1. A standard railing with standard toeboard on all exposed sides, or
 2. A floor hole cover of standard strength and construction. When the cover is not in place, the floor hole shall be constantly attended by someone or protected by a removable standard railing.
 3. Every floor hole into which persons cannot accidentally walk (on account of fixed machinery, equipment, or walls) shall be

protected by a cover that leaves no openings more than 1 inch wide. The cover shall be securely held in place to prevent tools or materials from falling through.

- ix. Floor opening covers may be of any material that meets the following strength requirements:
 - 1. Trench or conduit covers and their supports, when located in roadways, should be designed to carry a truck rear-axle load of at least 20,000 pounds.
 - 2. Manhole covers and their supports, when located in roadways, shall comply with local standard highway requirements if any; otherwise, they shall be designed to carry a truck rear-axle load of at least 20,000 pounds.
 - 3. The construction of floor opening covers may be of any material that meets the strength requirements. Covers projecting not more than 1 inch above the floor level may be used providing all edges are chamfered to an angle with the horizontal of not over 30 degrees. All hinges, handles, bolts, or other parts shall set flush with the floor or cover surface.
 - x. A platform should be provided where doors or gates open directly on a stairway, and the swing of the door shall not reduce the effective width to less than 20 inches.
- b. Protection for wall openings and holes.
- i. Wall openings from which there is a drop of more than 4 feet shall be guarded by one of the following:
 - 1. Rail, roller, picket fence, half door, or equivalent barriers. Where there is exposure below to falling materials, a removable toe board or the equivalent shall also be provided. When the opening is not in use for handling materials, the guard shall be kept in position regardless of a door on the opening. In addition, a grab handle shall be provided on each side of the opening with its center approximately 4 feet above floor level and of standard strength and mounting.
 - 2. Extension platforms onto which materials can be hoisted for handling will have side rails or equivalent guards of standard specifications.

3. Wall opening barriers (rails, rollers, picket fences, and half doors) shall be of such construction and mounting that they are capable of withstanding a load of at least 200 pounds applied in any direction (except upward) at any point on the top rail or corresponding member.
 4. Wall opening grab handles shall be not less than 12 inches in length and shall be so mounted as to give 3 inches clearance from the side framing of the wall opening. The size, material, and anchoring of the grab handle shall be such that the completed structure is capable of withstanding a load of at least 200 pounds applied in any direction at any point of the handle.
 5. Wall opening screens shall be of such construction and mounting that they are capable of withstanding a load of at least 200 pounds applied horizontally at any point on the near side of the screen. They may be of solid construction, of grillwork with openings not more than 8 inches long, or of slatwork with openings not more than 4 inches wide with length unrestricted.
- ii. Chute wall openings from which there is a drop of more than 4 feet shall be guarded by one or more of the barriers specified in paragraph 7.2.1.1 or as required by the conditions.
 - iii. Window wall openings at a stairway landing, floor, platform, or balcony, from which there is a drop of more than 4 feet, and where the bottom of the opening is less than 3 feet above the platform or landing, shall be guarded by standard slats, standard grill work, or standard railing. A standard toe board shall be provided where the window opening is below the landing, or platform.
 - iv. Temporary wall openings shall have adequate guards.
 - v. Where there is a hazard of materials falling through a wall hole, and the lower edge of the near side of the hole is less than 4 inches above the floor, and the far side of the hole more than 5 feet above the next lower level, the hole shall be protected by a standard toeboard, or an enclosing screen either of solid construction.

8. Protection of open-sided floors, platforms, and runways.

- a. Open-sided floors or platforms 4 feet or more above adjacent floor or ground level shall be guarded by a standard railing on all open sides except where there is entrance to a ramp, stairway, or fixed ladder. The railing shall be provided with a toeboard, beneath the open sides where:
 - i. Persons can pass.

- ii. There is moving machinery.
 - iii. There is equipment with which falling materials could create a hazard.
- b. Runways shall be guarded by a standard railing on all open sides 4 feet or more above floor or ground level. Wherever tools, machine parts, or materials are likely to be used on the runway, a toeboard shall also be provided on each exposed side. Runways used exclusively for special purposes (such as oiling, shafting, or filling tank cars) may have the railing on one side omitted where operating conditions necessitate, providing the falling hazard is minimized by using a runway of not less than 18 inches wide.
- c. Regardless of height, open-sided floors, walkways, platforms, or runways above or adjacent to dangerous equipment, pickling or galvanizing tanks, degreasing units, and similar hazards shall be guarded with a standard railing and toe board.

9. Stairs, railings and guards

(Subject to dates of construction and local building codes)

- a. Flights of stairs having four or more risers shall be equipped with standard stair railings or standard handrails. The width should be measured clear of all obstructions except handrails:
- i. On stairways less than 44 inches wide having both sides enclosed, at least one handrail, preferably on the right side descending.
 - ii. On stairways less than 44 inches wide having one side open, at least one stair railing on open side.
 - iii. On stairways less than 44 inches wide having both sides open, one stair railing on each side.
 - iv. On stairways more than 44 inches wide but less than 88 inches wide, one handrail on each enclosed side and one stair railing on each open side.
 - v. On stairways 88 or more inches wide, one handrail on each enclosed side, one stair railing on each open side, and one intermediate stair railing located approximately midway of the width.
- b. Winding stairs shall be equipped with a handrail offset to prevent walking on all portions of the treads having width less than 6 inches.
- c. Railings.

- i. Standard railings shall consist of top rail, intermediate rail, and posts, and shall have a vertical height of 42 inches nominal from upper surface of top rail to floor, platform, runway, or ramp level. The top rail shall be smooth-surfaced throughout the length of the railing. The intermediate rail shall be approximately halfway between the top rail and the floor, platform, runway, or ramp. The ends of the rails shall not overhang the terminal posts except where such overhang does not constitute a projection hazard.
- ii. Stair railings shall be of construction similar to a standard railing but the vertical height shall be not more than 34 inches nor less than 30 inches from upper surface of top rail to surface of tread in line with face of riser at forward edge of tread.
- iii. The posts of wood railings shall be of at least 2 inch by 4 inch stock spaced not to exceed 6 feet; the top and intermediate rails shall be of at least 2 inch by 4 inch stock. If top rail is made of two right-angle pieces of 1 inch by 4 inch stock, posts may be spaced on 8 foot centers, with 2 inch by 4 inch intermediate rail.
- iv. For pipe railings, posts and top and intermediate railings shall be at least 1 1/2 inches nominal diameter with posts spaced not more than 8 feet on centers.
- v. Structural steel railings, posts and top and intermediate rails shall be of 2 inch by 2 inch by 3/8 inch angles or other metal shapes of equivalent bending strength with posts spaced not more than 8 feet on centers.

Please contact the Department of Risk Management and Environmental Health & Safety with any questions you may have about these safety guidelines: (305) 348-2621.

USCG 122 – Free Roaming Animals on Campus

Last Update: 12/01/06

PURPOSE

To support and encourage the human elimination of feral cats and dogs on FIU premises in accordance with the recommended guidelines from the Wildlife Society.

AUTHORITY

Florida Animal Control

Florida Statute Chapters 372.265 and 767.10-16

Florida Administrative Code 68A-4.005

Wildlife Society Policy for Feral and Free-ranging Domestic Cats

SCOPE

University wide

BACKGROUND

Irresponsible pet owners who dump animals on University premises are in violation of Florida laws on animal protection and welfare. Free roaming animals are a public health and safety concern because of their tendency for aggressive behaviors. In addition, feral dogs and cats are known to be potential carriers of rabies and other diseases harmful to humans.

DEFINITIONS

Feral animals are typically distinguished from domestic animals by their degree of dependence on, and their behavior towards humans.

GUIDELINES

In order to prevent and control the population of various feral animals on University premises, all members of the University community are required to abide by the following:

- Do not bring unleashed or engaged animals onto University premises
- Do not feed or leave food in the open for consumption by free roaming animals on campus
- Discard food and refuse in closed receptacles only
- Report the presence of any feral or wild animal observed on campus to the Public Safety Department at (305) 348-2626
- Do not pet or confront any feral or wild animal observed on University premises
- Seek immediate medical attention if scratched or bitten by any free roaming animal and report incident to the Public Safety Department.

Employees who encourage the presence of feral and free roaming animals on premises by providing food or protection for these animals contribute to public endangerment and will be held accountable for such behaviors.

Please contact the Department of Risk Management and Environmental Health and Safety with any questions you may have about these safety guidelines: (305) 348-2621.