

**Applies to:** (examples; Faculty, Staff, Students, etc)

Faculty , Staff , Students , Contractors\_Vendors

**Policy Overview:**

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Frequency of Review: Every 2 Years

University departments shall provide employees adequate personal protective equipment where necessary in the performance of their duties. Departments shall determine and document what constitutes adequate personal protective equipment (PPE) through completion of a job hazard assessment or development of a standard operating procedure (SOP). Adequate PPE shall be provided to employees at no cost, including replacement resulting from regular use. All required PPE items identified during the hazard assessment or in the SOP will be reviewed by the Emergency Management Coordinator and EH&S and/or the University Safety Committee before purchase. Departments shall ensure that employees are adequately trained and that assigned PPE is worn when hazards are present.

Employees shall be expected to use assigned PPE when called for by the hazard assessment, standard operating procedure, container label, or material safety data sheet. PPE shall be maintained by the employee in a clean, sanitary and usable condition and all PPE failure shall be reported to the supervisor immediately.

Visitors shall be provided appropriate PPE when visiting a hazardous area and they are expected to comply with this policy.

**Details:**

a. Introduction

i. Occupational Safety & Health Administration (OSHA) Personal Protective Equipment Standards - General Requirements, 29 CFR 1910.132, govern the use of personal protective equipment at University of Health Sciences and Pharmacy in St. Louis. Other federal agencies that govern the use of personal protective equipment (PPE) in the workplace include, but are not limited to:

1. Environmental Protection Agency (EPA)
2. Centers for Disease Control and Prevention (CDC)
3. National Institutes of Health (NIH)
4. U.S. Department of Agriculture/Animal Plant Inspection Service
5. U.S. Public Health Service
6. Nuclear Regulatory Commission

ii. Examples of PPE include, but are not limited to, hard hats, plain and prescription safety glasses, goggles, welding helmets, shields, safety shoes, laboratory coats, aprons, gloves, protective clothing, ear muffs or plugs, and respirators.

**Procedures:**

I. Laboratory PPE

a. PPE must be worn when working with laboratory hazards (chemical, biological, etc.). At a minimum this must include:

- i. Laboratory coats (or other protective clothing such as aprons, scrubs, coveralls, etc.)
- ii. Safety glasses or goggles
- iii. Gloves resistant to the material used
- iv. Appropriate footwear (closed at the heel and toe)

b. Sandals or any other open-toe/open-heel shall not be worn when working in the laboratory. Other protective equipment, such as splash goggles, face shields, aprons, thermal or cut resistant gloves, hearing protection, or respirators, must be worn when conditions dictate.

c. Completion of a hazard assessment or SOP may allow individual laboratory PPE requirements to be determined and justified by a laboratory supervisor or principal investigator (PI). Documentation of PPE selection must be included in the SOP developed for the experiment or laboratory operation. Any deviations from the required baseline PPE mentioned above shall be approved by the Emergency Management Coordinator and/or the University Safety Committee.

d. All students shall purchase or obtain the necessary and approved PPE designated by the department or instructor responsible for the course. Students must be trained in the proper usage and care of the PPE and they are expected to utilize the required PPE while in the laboratory.

## II. Electrical Protective Devices

a. Electrical protective devices (i.e., rubber insulated gloves, sleeves, matting, blankets, covers and line hoses) shall be provided to University of Health Sciences and Pharmacy in St. Louis employees when working with high voltage electrical hazards. Use of these devices at University of Health Sciences and Pharmacy in St. Louis will be governed by the requirements outlined in the OSHA Electrical Protective Devices Standards, 29 CFR 1910.137.

## III. Eye and Face Protection

a. Appropriate eye and face protection shall be provided to University of Health Sciences and Pharmacy in St. Louis employees when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation. Use of eye and face protection at University of Health Sciences and Pharmacy in St. Louis will be governed by the requirements outlined in the OSHA Eye and Face Protection Standards, 29 CFR 1910.133. All eye and face protection must be approved by the American National Standards Institute, ANSI standard Z87.1-1989.

## IV. Safety Glasses

a. Safety glasses with side shields are required where there is a potential of being struck by projectile flying objects. Detachable, self-locking, or slide-on shields are acceptable if properly installed on the safety glasses prior to exposure to eye hazards. Operations requiring safety glasses include, but not limited to:

- i. Minor splash potential
- ii. Grinding or use of abrasive wheels
- iii. Chiseling
- iv. Use of power saw
- v. Use of staple guns
- vi. Use of power tools (drill, sander, etc.)
- vii. Machining
- viii. Other similar type operations

## V. Safety Goggles

a. Safety goggles are required in chemical handling and laboratory operations where there is potential for chemical fumes, severe splashes, mists, sprays, or dust exposure to the eyes.

## VI. Face shields

a. Face shields are required where there is potential face exposure to projectiles, chemicals, or radiant energy. Face shields cannot be used as a substitute for eye protection. It is often necessary to provide both means of protection.

## VII. Filtered lenses

a. Eye and face protection with filter lenses are required where there is a potential of being exposed to injurious light radiation. Operations requiring filter lenses include: welding, work with UV lamps and work with lasers. Select the appropriate lens shade or filter by referring to the selection tables in 29 CFR 1910.133 (a) (5) and ANSI standard Z136.1-2000.

## VIII. Prescription Lenses

a. Employees who wear prescription lenses and who are exposed to eye hazards must wear eye protection that incorporates the prescription in the design or wear eye protection that will fit over the prescription lenses.

## IX. Contact Lenses

a. Contact lenses do not provide eye protection and may entrap objects and chemicals. Therefore, if they are worn in hazardous environments, they must be used in conjunction with appropriate protective eyewear (safety goggles or safety glasses). OSHA Respiratory Protection Standard 29 CFR 1910.134(e) (5) (ii) specifically prohibits the use of contacts under respirators and gas masks.

## X. Foot Protection

a. Appropriate protective footwear shall be provided to University of Health Sciences and Pharmacy in St. Louis employees when exposed to hazards of the foot such as crushing hazards caused by falling or rolling objects, objects piercing the sole, electrical shock hazards and chemical hazards. Use of these devices at University of Health Sciences and Pharmacy in St. Louis will be governed by the requirements outlined in OSHA Occupational Foot Protection Standards, 29 CFR 1910.136. Safety shoes with protective toe caps and steel shanks in the sole must be approved by the American National Standards Institute, ANSI standard Z41-1991, to be used at University of Health Sciences and Pharmacy in St. Louis. Footwear used for chemical resistance must be constructed of elastomers resistant to the chemical used.

b. The suitability of wearing sandals, clogs, etc., must be determined by supervisory personnel and must include an evaluation of possible hazards in the workplace. As a general rule, going barefoot is not allowed in any work environment at University of Health Sciences and Pharmacy in St. Louis.

c. Special modifications which are a medical necessity will be paid for by the employer upon presentation of a prescription issued by a medical doctor, osteopath, or podiatrist.

## XI. Hand Protection

a. Appropriate hand protection shall be provided to University of Health Sciences and Pharmacy in St. Louis employees when exposed to hazards of the hand, such as skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures,

chemical burns, thermal burns, and harmful temperature extremes. Use of hand protection at University of Health Sciences and Pharmacy in St. Louis will be governed by the requirements outlined in OSHA Hand Protection Standards, 29 CFR 1910.138. Selection of appropriate hand protection shall be based on the hazards identified, level of protection needed, duration of use, dexterity required, and fit. Elastomeric gloves used for chemical resistance must be constructed of elastomers resistant to the chemical used.

#### XII. Head Protection

a. Appropriate head protection shall be provided to University of Health Sciences and Pharmacy in St. Louis employees when working in areas where head injuries could occur from falling objects, contact with stationary objects, or contact with electrical shock hazards. Use of head protection at University of Health Sciences and Pharmacy in St. Louis will be governed by the requirements outlined in OSHA Head Protection Standards, 29 CFR 1910.135. All protective helmets must be approved by the American National Standards Institute, ANSI standard Z89.1-1986, to be used at University of Health Sciences and Pharmacy in St. Louis.

#### XIII. Hearing Protection

a. Hearing protection shall be made available to University of Health Sciences and Pharmacy in St. Louis employees exposed to noise levels of 85 decibels or greater. Hearing protection must be worn by employees exposed to noise levels of 90 decibels or greater.

b. Use of hearing protection devices at University of Health Sciences and Pharmacy in St. Louis will be governed by the requirements outlined in the UHSP Hearing Conservation Manual and OSHA Occupational Noise Exposure Standards, 29 CFR 1910.95.

c. Employees exposed to noise levels at or above an 8-hour time-weighted average sound level (TWA) of 85 decibels measured on the A scale (slow response) or, equivalently, a dose of fifty percent must be included in the UHSP Hearing Conservation Program as outlined in the Hearing Conservation Manual. Inclusion in the program requires completion of annual hearing tests (audiograms) and training.

d. All hearing protection devices used at University of Health Sciences and Pharmacy in St. Louis must have an Environmental Protection Agency (EPA) Noise Reduction Rating (NRR) shown on the packaging. Hearing protectors must attenuate employee exposure to an 8-hour time-weighted average of 85 decibels or below.

#### XIV. Body Protection

a. Body protection shall be provided to University of Health Sciences and Pharmacy in St. Louis employees to prevent skin exposure to harmful contaminants (i.e., harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors), limit contamination of "street clothing," and aid the decontamination process. Selection of appropriate body protection must be based on the hazards identified, parts of the body affected, level of protection needed, duration of use and fit.

#### XV. Respiratory Protection

a. Respiratory protection shall be assigned to University of Health Sciences and Pharmacy in St. Louis employees when exposed to contaminated breathing air that could cause occupational diseases (i.e., harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors). Use of respiratory protection at University of Health Sciences and Pharmacy in St. Louis will be governed by the requirements outlined in the UHSP Respiratory Protection Manual and OSHA Respiratory Protection Standards, 29 CFR 1910.134.

b. On an annual basis, all users of respiratory protection must be medically approved by an Occupational Medicine physician, complete required training, and be fit tested on the respirator to be used.

c. All respiratory equipment must be certified by the National Institute for Occupational Safety and Health (NIOSH) to be used at University of Health Sciences and Pharmacy in St. Louis. Purchase of respiratory protection will be completed by Environmental Health and Safety, except for filtering face pieces (dust masks).

### Resources:

American National Standards Institute

CDC Biosafety in Microbiological and Biomedical Laboratories (BMBL) 5th Edition

National Institute for Occupational Safety and Health (NIOSH)

OSHA Occupational Noise Exposure Standards, 29 CFR 1910.95

OSHA PPE General Requirements, 29 CFR 1910.132

OSHA Eye and Face Protection Standards, 29 CFR 1910.133

OSHA Respiratory Protection Standards, 29 CFR 1910.134

OSHA Head Protection Standards, 29 CFR 1910.135

OSHA Occupational Foot Protection Standards, 29 CFR 1910.136

OSHA Electrical Protective Devices Standards, 29 CFR 1910.137

OSHA Hand Protection Standards, 29 CFR 1910.138

OSHA Exposure to Hazardous Chemicals in Labs, 29 CFR 1910.1450

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