# PERSONAL PROTECTIVE EQUIPMENT

# A. SCOPE

This policy covers any University student, faculty, or staff member who, in the course of their duties, shall perform work in areas where recognized hazards are present. Examples of recognized hazards include, but are not limited to, biological exposure, chemical exposures, radiological exposures, sharp objects which may cut or puncture the skin, excessive noise, heavy objects which may fall onto the feet or head, flying debris which may be inhaled or may strike the eyes, laser energy or other non-ionizing radiation, or any other hazard which may cause injury, illness, or impairment by inhalation, absorption, ingestion, injection, or mechanical action. Personal protective equipment (PPE) should not be relied upon to provide protection against hazards, but should be used in conjunction with engineering controls (guards, etc.) and administrative controls (sound operational practices, etc.).

# B. GENERAL REQUIREMENTS

In accordance with the OSHA Personal Protective Equipment standard (29 CFR 1910.132) each department is required to take action in the following major areas.

- Each department shall perform a hazard assessment of those work areas or jobs where hazards, as described above, are likely to be present.
- Where a hazard assessment has determined that there is sufficient cause to require personal protective equipment (PPE), each department shall provide and require the use of such equipment at no cost to students, faculty, or staff.
- Each department shall ensure that all PPE, whether provided by the University or owned by the students, faculty, or staff, is capable of providing adequate protection and is in a clean and reliable condition at all times.
- Each department shall provide training to ensure that students, faculty, and staff know when and why PPE is necessary, how to use it properly, how to care for it, the equipment’s usable lifetime, and its limitations. If there is reason to believe that someone does not have this level of knowledge, the department shall provide retraining for that individual.

# C. RESPONSIBILITY

## 1. Supervisor

It is the responsibility of the supervisor to perform hazard assessments to determine the hazards which are present in a campus workspace or are encountered during normal duties. A hazard assessment shall be performed whenever there is a significant change in the workplace or in a student, faculty, or staff member’s regular duties. The form needed to perform a hazard assessment is located on the University's website. See Appendix A of

this document for additional information. The Campus Health and Safety Committee is available to provide assistance to supervisors upon request. It is also the supervisor's responsibility to:

- Provide site-specific training in the proper selection, use, limitations, and care of PPE (with the assistance of the Campus Health and Safety Committee upon request).
- Ensure that students, faculty, and staff have received proper equipment as required by the results of the hazard assessment.
- Ensure that students, faculty, and staff have completed any required medical examinations prior to using PPE.
- Ensure that all PPE is in a clean and reliable condition prior to use.

## 2. Department

It is the responsibility of the department to cover any costs related to the use of PPE. This may include, but is not limited to, fit testing, medical examinations, costs of training and training materials, service and maintenance, and associated supplies. Additionally, departments shall keep all records regarding their compliance with this plan such as attendance at training sessions, certification of the completion of any required medical examinations, and any other pertinent information. Departments' record keeping may also be audited periodically by the Campus Health and Safety Committee.

## 3. Campus Health and Safety Committee

It is the responsibility of the Campus Health and Safety Committee to provide assistance, upon request, in performing hazard assessments, reviewing hazard assessments with the supervisor, and providing assistance in selecting adequate PPE. In addition, the Campus Health and Safety Committee shall assist supervisors in providing any necessary PPE training and may periodically assist departments by reviewing compliance with this document and providing feedback, clarification, and other assistance as needed.

## 4. Students, Faculty, and Staff

Lastly, it is the student, faculty, or staff member's responsibility to wear PPE as needed in order to perform his or her role safely, to provide daily care of the equipment, to attend training sessions as required, to inspect the equipment for wear or damage, and to report any damaged, old, or malfunctioning PPE to his or her supervisor immediately. Supervisors

will inform students, faculty, and staff of the specific PPE required based upon the hazard of the job or task, but students, faculty, and staff should also always consider appropriate PPE that may be needed.

Any student, faculty, or staff member who feels uncomfortable working in an area or is unsure of the policies or procedures to work safely should cease all activities and express those concerns to his or her supervisor.

# D. PPE HAZARD ASSESSMENTS

It is each department's responsibility to ensure that supervisors complete PPE hazard assessment for their students, faculty, and staff. Supervisors must document the physical, chemical, and biological hazards that may be present in the workplace, determine if PPE is needed, and communicate this information to their students, faculty, and staff. It is expected that an initial evaluation would be performed and re-evaluated as new potential hazards are added to the area or changes to the environment may change the hazard.

https://www.ecsu.edu/safe/environment-workplace-saftey/documents/job-hazard-analysis.pdf

The first step in performing a PPE hazard assessment is to determine the types of hazards that are likely to be found in the workplace. A hazard is simply anything that is likely to cause an injury or an illness. Hazards fall into three general categories:

- **Physical hazards** are hazards that cause injury through some mechanical action. Some examples of this include heat burns, tripping, cutting or puncturing the skin, falling from a height, being struck by a moving object, electric shock, or arc flash.
- **Chemical hazards** are those hazards that cause injury or illness through chemical actions or through the properties of a chemical. Chemical hazards can have physical effects, such as being burnt by a fire caused by a flammable chemical, or they can have health effects such as causing chemical burns or illnesses due to overexposure. Safety Data Sheets are an excellent source of information on the hazards of the chemicals that are in your workplace
- **Biological hazards** are hazards created by infectious diseases. Examples of biological hazards would be Tuberculosis, HIV, Hepatitis-B, or any other disease that passes from person to person or animal to person through direct or indirect contact or through laboratory procedures.

# E. PPE FOR THE HANDS (29 CFR 1910.138)

Students, faculty, and staff shall wear appropriate gloves to protect their hands from chemicals which may be absorbed through or damage the skin, objects which may cut or

puncture the skin, biological agents, human or animal tissues, radioactive materials, or any other hazard which may cause illness, injury, or impairment. Protective lotions or creams are not adequate substitutes for gloves. Gloves shall be chosen according to the type of work done. For example, gloves for chemical work shall be chosen for resistance to the specific solvents or other compounds being used. Gloves used for trash pickup shall be cut and puncture resistant.

## F. PPE FOR THE FEET (29 CFR 1910.136)

Students, faculty, and staff shall wear appropriate shoes or boots when working in areas where heavy objects may fall onto the feet or where there are objects which may penetrate the shoe and cut or puncture the feet. Protective footwear shall comply with ANSI Standard Z41- 1991, “American National Standard for Personal Protection-Protective Footwear.”

## G. PPE FOR THE HEAD (29 CFR 1910.135)

Students, faculty, and staff shall wear appropriate protective helmets when working in areas where falling or moving objects may strike the head. Protective helmets purchased after July 5, 1994, shall comply with ANSI Z89.1-1986, “American National Standard for Personnel Protection-Protective Headwear for Industrial Workers-Requirements.” Protective helmets purchased before July 5, 1994, shall comply with the ANSI standard “American National Standard Safety Requirements for Industrial Head Protection,” ANSI Z89.1- 1969. In addition, those employees working near exposed electrical conductors which could come into contact with the head shall wear protective headwear designed to reduce any electrical shock hazards.

## H. PPE FOR THE RESPIRATORY SYSTEM (29 CFR 1910.134)

Students, faculty, and staff shall use appropriate respiratory protective equipment (i.e., air purifying respirators, powered air purifying respirators, or self-contained breathing apparatus) when required due to inhalation hazards associated with their job or workplace.

## I. PPE FOR THE FACE AND EYES (29 CFR 1910.133)

Students, faculty, and staff shall wear appropriate protective eye and face devices (safety glasses, goggles, or face shields) when working in areas where laser, ultraviolet, or other intense illumination is present; where flying debris may strike the eyes; where there may be splashing of biologic agents including blood and other body fluids; or where there may be chemical splashes, mists, gases, or vapors which may cause illness, injury, or impairment. The protective eye and face devices shall comply with ANSI Z87.1-1989, “American National

Standard Practice for Occupational and Educational Eye and Face Protection." Additionally, safety glasses, goggles, and face shields shall provide protection from flying debris entering from the side of the protective equipment and shall accommodate prescription lenses, either by fitting over prescription lenses or by incorporating them into its design. Prescription eyeglasses alone do not meet the requirements of this section. Prescription glasses that do not meet ANSI Z87.1-1989 are not acceptable for use as safety glasses. Students, faculty, and staff should discuss prescription safety glasses with their eye-care provider to ensure that they meet all relevant standards.

# J. PPE FOR NOISY ENVIRONMENTS (29 CFR 1910.95)

The Hearing Conservation Amendment to the OSHA Occupational noise exposure standard, 29 CFR 1910.95, requires that employers establish a hearing conservation program for employees whose noise exposures equal or exceed an eight-hour time-weighted average (TWA) of 85 dBA. Students, faculty, and staff shall use appropriate hearing protective equipment when required due to noise hazards associated with their job or workplace.

# K. PPE FOR ELECTRICAL WORK (29 CFR 1910.137)

PPE required for electrical work includes, but is not limited to, insulating blankets, matting, covers, line hose, gloves, and sleeves. These items shall be manufactured using a seamless process, be clearly marked with their class of protection, and comply with the American Society for Testing and Materials (ASTM) standards listed below.

ASTM D 120-87, Specification for Rubber Insulating Gloves ASTM
D 178-93, Specification for Rubber Insulating Matting ASTM D
1048-93, Specification for Rubber Insulating Blankets ASTM D
1049-93, Specification for Rubber Insulating Covers ASTM D
1050-90, Specification for Rubber Insulating Line Hose ASTM D
1051-87, Specification for Rubber Insulating Sleeves

### 1. Use of Electrical PPE

PPE for electrical work may not be used for tasks where the electrical hazard may exceed the class rating of the protective equipment.

**2. Protector gloves shall be worn over insulating gloves except:**

- Where very high finger dexterity is needed, using class 0 gloves, so long as extra care is taken to handle sharp objects carefully.
- Cases similar to the above, where the employer can demonstrate that damage to the gloves is unlikely and the gloves worn are at least one class better than what is required for the task.

Note: Gloves used in this way may not be used for higher voltages until they have been re-tested.

**3. Care and Testing of Electrical PPE**

PPE for electrical work shall be maintained in a safe, reliable condition. It shall be inspected before each day's use and immediately following any incident that can reasonably be suspected of having caused damage. Electrical PPE shall be replaced if there is a hole, tear, cut, or punch; ozone deterioration; embedded objects; or there are texture changes such as softening, hardening, swelling, stickiness, or loss of elasticity.

Electrical PPE shall be tested according to the ASTM standards referenced above, as well as:

- ASTM D 478-92, Specifications for In-Service Care of Insulating Line Hose
- ASTM D 479-93, Specifications for In-Service Care of Insulating Blankets
- ASTM D 496-93b, Specification for In-Service Care of Insulating Gloves and Sleeves

| **Type of Equipment** | **When to Test** |
|---|---|
| Line Hose | When the insulating value is suspect |
| Covers | When the insulating value is suspect |
| Blankets | Before its first issue and every 12 months thereafter |

| | |
|---|---|
| Gloves | Before its first issue and every 6 months thereafter |
| Sleeves | Before its first issue and every 12 months thereafter |