Personal Protective Equipment (PPE)
February 2022

Purpose

This section is designed to provide guidance on the use of Personal Protective Equipment (PPE), most commonly used for protection of the eyes and face, head, feet, hands, and ears.

Wherever the potential for injuries cannot be eliminated through engineering and work practice controls, appropriate PPE will be made available to college employees. The nature of the hazard dictates the type of PPE needed for effective protection.

Definitions

1. Personal Protective Equipment (PPE) – includes devices and clothing designed to be worn or used for the protection or safety of an individual while in potentially hazardous areas or performing potentially hazardous operations.

References

29 CFR 1910.132	General Requirements
29 CFR 1910.133	Eye and Face Protection
29 CFR 1910.135	Head Protection
29 CFR 1910.136	Foot Protection
29 CFR 1910.138	Hand Protection
29 CFR 1910.95	Occupational Noise Exposure
ANSI S3.19	Hearing Protectors and Physical Attenuation of Earmuffs
ANSI/ISEA Z87.1	Occupational and Educational Personal Eye and Face Protection Devices
ANSI/ISEA Z89.1	Industrial Head Protection
ASTM F2413	Performance Requirements for Protective (Safety) Toe Cap Footwear

Procedures

1. General Requirements:

    a. All attempts will be made to protect personnel from hazards by controlling or eliminating the hazards. Do not use PPE as a substitute for engineering controls and/or work practices. Use the PPE in conjunction with engineering and work practice controls to provide for employee safety and health in the workplace.

    b. These stipulations also apply to supervisors and management personnel when visiting work sites and all visitors while they are in hazardous areas.

    c. The supervisor shall assess the workplace to determine if hazards are present, or are likely to be present, that require the use of PPE. If such hazards are present, or likely to be present, the supervisor shall have each affected employee use the types of PPE that will protect them from the hazards identified in the hazard assessment.

    d. All PPE must:

        i. Provide adequate protection against the particular hazards for which they are designed.
        ii. Be reasonably comfortable when worn under the designated conditions.
        iii. Fit snugly without interfering with the movements or vision of the wearer.
        iv. Be durable.
        v. Be capable of being disinfected.
        vi. Be easily cleanable.
        vii. Be kept clean and in good repair.
        viii. Be evaluated for integrity, and replacement, after any significant impact or other potentially damaging incident. (Incidents which involve significant impact are to be reported immediately to the Coordinator of Environmental Safety and Health.)
        ix. Be replaced immediately when visibly damaged.

2. Eye and Face Protection:

    a. Covered Personnel

i. All College employees exposed to impact hazards from flying objects and chemical hazards from liquid splashes will be issued eye protection at hire. Specifically, College employees in the following disciplines will be issued both safety glasses and safety goggles:

a. Environmental Services
b. Maintenance
c. Theater

College employees in other disciplines may be deemed appropriate users by the Coordinator of Environmental Safety and Health.

b. When to Use Eye and Face Protection

i. Eye and face protection is designed to protect the wearer from flying objects and from chemical hazards due to splashes. Anytime an employee is working in an area where injurious materials may impact eyes, eye protection must be worn. In some cases, the work an employee is performing creates a hazard for the employee. In some cases, the work of one employee creates a hazard for others. Always ensure everyone in close proximity to a hazard is adequately protected.

ii. The following tasks and equipment are associated with impact and chemical splash hazards. Take precautions and think about whether you, or people near you, are at risk whenever:

a. Using power tools (saws, drills, power washers)
b. Handling or using hazardous liquids (paint, stain, sanitation chemicals)

iii. Because serious and irreversible damage can occur when objects or chemicals contact eyes, it is important to consistently wear protective eyewear appropriate to the hazard.

c. Safety Glasses

i. Safety glasses or safety spectacles are intended to shield the wearer's eyes from the impact hazards such as flying objects, fragments, particles, large chips, sand and dirt. However, they do not provide an effective barrier against liquid splashes and can allow liquid chemicals to contact

eyes. Workers are required to wear safety glasses with side shields when there is a hazard from flying objects. Whenever a splash hazard exists, safety goggles are needed.

ii. Never assume prescription eyeglasses are rated for impact resistance. Even when rated for impact resistance, most prescription eyeglasses do not wraparound or otherwise include side protection, making them unacceptable as protective eyewear. Wear specially designed "over the glass" safety glasses, or safety goggles, over prescription eyeglasses to ensure impact resistance.

d. Safety Goggles

i. Safety goggles protect eyes against impact and liquid splash. They protect eyes, eye sockets, and the area immediately surrounding the eyes from a variety of hazards by creating a tight seal which prevents objects and liquids from entering under or around the goggles. This is especially important when working with or around liquids that may splash or spray into the eyes. For individuals requiring vision correction, safety goggles permit the wearing of prescription glasses inside the protective lens of the goggle.

ii. Several ventilation options are available when selecting safety goggles. Unvented goggles offer the greatest degree of protection from harmful irritants of all kinds, but they tend to fog and require frequent removal and lens cleaning. Indirectly vented goggles prevent fogging by allowing air circulation and still provide effective protection against airborne particles, dust, and liquids. Directly ventilated goggles only protect against passage of large particles into the goggle. They are ineffective for protecting eyes against liquid splashes. Indirectly vented safety goggles are the preferred equipment for eye protection in our workplace because of the wide range of tasks against which they provide effective protection.

e. Face Shields

i. Clear face shields provide protection for the skin of the entire face and are recommended where workers are exposed to impact hazards such as flying fragments, objects, large chips, and particles or severe chemical hazards. Face shields are designed as added protection to be worn over

safety goggles or safety glasses to enhance protection of the face and are ineffective eye protection used alone.

ii. Welding by College employees in the workplace is not permitted, making the existence of welding helmets and shaded lenses designed for use while welding unnecessary.

f. First Aid for Eye Injuries

i. Knowing the location of the nearest facility designed for quick drenching/flushing of the eyes, face and body can reduce injury severity should a chemical splash occur.

ii. Combination eyewash/deluge shower facilities are placed in high risk areas where tasks involving injurious liquids (acids, bases) are routinely performed, such as chemistry laboratories.

iii. Plumbed eyewash stations are provided in areas of medium risk such as maintenance, environmental services, digital fabrication, and theater workshops.

iv. Personal eyewash bottle stations are available in rooms where low risk tasks occur such as the café kitchen, maintenance office area, art classrooms, and theater backstage.

v. Portable personal eyewash bottles are available on all Environmental Services and Maintenance equipment carts.

vi. Familiarize yourself with the location and operation of eyewash facilities in your immediate work area.

g. Where to Obtain Eye and Face Protection

i. Eye and face protection equipment is stored in the Facilities Office and issued to new hires by the Coordinator of Environmental Safety and Health. The Coordinator of Environmental Safety and Health will ensure adequate inventory and track distribution. Replacements will be reissued per the manufacturer's recommendation, whenever they are reported to have received a considerable strike (even if there is no visible damage) or when an equipment inspection reveals faulty or damaged parts.

Incidents which involve significant strikes to the protective eyewear are to be reported to the Coordinator of Environmental Safety and Health.

h. Storage and Care

i. Store eyewear in a clean, dry place out of direct sunlight. Clean only with mild soap and lukewarm water. DO NOT use chemicals, gasoline, or similar substances to clean protective eyewear.

3. Foot Protection

a. Covered Personnel

i. All College employees exposed to potential of foot injuries due to falling or rolling objects, or objects piercing the sole, are required to obtain and have available on the first day of work protective footwear (steel-toed or composite toed) meeting the ASTM 2413 performance specification. College employees whose job duties necessitate the wearing of protective footwear will be reimbursed in accordance with the College's Safety Footwear Purchasing Procedures, found on the College portal in the Administrative Procedures Manual. Specifically, College employees in the following disciplines will be required to purchase shoes meeting ASTM 2413 standards:

a. Environmental Services (must also be non-marking, slip resistant sole as indicated by manufacturer specification)
b. IT
c. Maintenance
d. Receiving and Mail Services
e. Theater

College employees in other disciplines may be deemed appropriate users by the Coordinator of Environmental Safety and Health.

ii. Employees unable to wear either steel toed, or composite toed, protective footwear meeting the above performance specification are required to work with the Human Resources Department to provide evidence of the need for an accommodation.

b. When to Use Protective Footwear

i. Protective footwear is designed to protect the wearer from injury when working in an area, or around equipment, where there is a danger of foot injury due to falling or rolling objects or from crushing materials. Anytime an employee is working in an area where objects may roll across or strike a worker's foot, protective footwear must be worn. In some cases, the work an employee is performing creates a rolling object hazard for the employee. In some cases, the work of one employee creates a rolling object hazard for others.

ii. The following tasks and equipment are associated with rolling object hazards. Take precautions and think about whether you, or the people around you, are at risk whenever:

a. Moving heavy objects (furniture, computer equipment, aerial lift, etc.)
b. Using motorized and/or hand-operated portable equipment ~~such as a~~ (pallet jack, hand truck, floor buffers and strippers, refuse boats and barrels, etc.)
c. Operating a powered industrial truck (forklift, etc.)

c. Where to Obtain Protective Footwear

i. Many shoe manufacturers make "safety shoes" and many retailers sell them. It is important when searching for protective footwear to heed the requirements of our reimbursement program. Employees may purchase any style of steel toed or composite toed protective footwear, provided the purchased shoe meets ASTM 2413 Standard. Shoes manufactured to these specifications will be labeled as meeting the requirement. Shoes not clearly marked as meeting the ASTM 2413 criteria are not reimbursable under the College's Safety Footwear Purchasing Procedures.

d. Storage and Care

i. Store and clean shoes according to manufacturer's instructions. As with all protective equipment, safety footwear should be inspected prior to each use and checked for wear and tear at reasonable intervals. This includes looking for cracks or holes, separation of materials, broken buckles, or laces. The soles of shoes should be checked for pieces of metal or other embedded items that could present electrical or tripping

hazards. Employees should follow the manufacturers' recommendations for cleaning and maintenance of protective footwear and order replacement shoes as soon as visible damage is noted or when an equipment inspection reveals cracks, faulty or damaged parts.

4. Hand Protection

    a. Covered Personnel

        i. All College employees exposed to potential injuries to hands and fingers will have access to hand protection designed for the hazards they are likely to encounter in the performance of departmental duties as identified by the department manager and the Coordinator of Environmental Safety and Health. Department managers are responsible to ensure employees wear PPE. Specifically, College employees in the following disciplines should work with their managers to ensure proper hand protection is adequate and being used correctly:
            a. Environmental Services
            b. IT
            c. Maintenance
            d. Mail/Supply Center/Central Receiving
            e. Theater

    b. When to Use Hand Protection

        i. Hand protection is designed to protect wearers from various hazard types including skin contact with harmful substances (absorption, chemical burns) and mechanical injuries such as lacerations, abrasions, punctures, and harmful temperature extremes. Anytime an employee is performing a task where harmful substances may contact skin and/or skin may be abraded or lacerated, hand protection must be worn.

        ii. The following tasks and equipment are associated with the potential for injury to hands from contact with harmful substances and/or mechanical injury:

            a. Handling or using hazardous liquids (sanitation chemicals, paint, stain)

b. Using hand or power tools (saws, drills, pry bars, knives, putty knives) or otherwise exerting significant pressure manually

c. Material handling (wood, metal, glass, cinder block, brick)

d. General carpentry

e. Small parts assembly

f. Warehousing

iii. It is important to consistently wear gloves specifically designed for protection against the hazards of the task being performed. Gloves designed for one hazard may not protect against a different hazard even though they may appear to be an appropriate protective device. Gloves can be expected to provide protection related to mechanical protection (cut-resistance, abrasion resistance) and chemical protection (permeation and degradation resistance).

c. Disposable or Single Use Gloves

i. Disposable gloves are designed to protect a wearer from incidental contact with chemicals. Discard disposable gloves after use. Extended contact with chemical substances may require more substantial protection. Consult the Coordinator of Environmental Safety and Health for help in identifying effective extended-contact chemical protection.

ii. Nitrile Gloves are preferred over latex for the greater degree of chemical resistance. The use of nitrile also eliminates the risk of allergic reactions to latex. Nitrile gloves are effective protection against solvents, oils, greases, weak acids, detergents, soaps and disinfectants. Latex is ineffective against solvents, especially gasoline. Damage to nitrile gloves is more apparent and easily identified than damage to latex gloves.

d. Leather Work Gloves

i. Leather work gloves are designed to protect a wearer from the hazards of material handling, heavy hand tool use, general construction, and short duration extreme temperature contact. Leather work gloves protect the wearer from abrasion injuries, minor penetrating injuries (splinters),

and burns from incidental contact with hot or cold objects. Leather gloves are made from a wide variety of raw materials and should be chosen based on the characteristics most effective against the identified hazard. For instance, grain leather is a great choice when ability to repel water and dexterity are important. For rugged applications, suede or split leather is the best choice. Performance characteristics, in terms of wear, abrasion and tensile strength, vary with the materials of construction.

e. Cut Resistant Gloves

i. Cut resistant gloves are designed to protect a wearer from the hazards of sharp-object material handling, use of sharp implements, warehousing, and packaging. This glove type protects the wearer from lacerations caused by objects. The degree of cut resistance is assigned by manufacturers as prescribed by ANSI/ISEA Standard 105. ANSI cut level A3 and above are recommended for use on campus. Cut resistance is just one facet of protection. These gloves do not provide other forms of protection, such as protection against chemical absorption.

f. Where to Obtain Hand Protection

i. Disposable gloves are provided by the area supervisor for the tasks which require them.
ii. Work gloves are issued to employees by the area supervisor for the tasks which require them. Replacements will be issued per the manufacturer's recommendation or whenever damage is observed.
iii. The Coordinator of Environmental Safety and Health assists supervisors with the selection of task appropriate hand protection.

g. Storage and Care

i. Never attempt to reuse disposable gloves. Store gloves in a clean, dry place. Clean only as directed by manufacturer. Replace torn or damaged gloves as soon as deterioration is noted.

5. Head Protection

a. Covered Personnel

i. All College employees exposed to hazards from falling objects will be issued protective headwear, for their individual use, at hire. Specifically,

College employees in the following disciplines will be issued a Type 1 Class E hard hat:

a. Environmental Services
b. Maintenance
c. Theater

College employees in other disciplines may be deemed appropriate users by the Coordinator of Environmental Safety and Health:

b. When to Use Hard Hats

i. Hard hats are designed to protect the wearer from being injured by falling objects. Anytime an employee is working in an area where objects may fall from above, a hard hat must be worn. In some cases, the work an employee is performing creates a falling object hazard for the employee. In some cases, the work of one employee creates a falling object hazard for others.

ii. The following tasks and equipment are associated with falling object hazards. Take precautions and think about whether you, or the people below you, are at risk whenever:

a. Sweeping/dusting overhead surfaces or performing any task which could dislodge unseen objects

b. Using extension poles, scaffolding, or ladders to perform work overhead

c. Where to Obtain Hard Hats

i. Hard hats are stored in the Office of Facilities Management (A203) and issued to new hires in the above categories by the Coordinator of Environmental Safety and Health. The Coordinator of Environmental Safety and Health will ensure adequate inventory and track issue dates.

ii. Replacements will be reissued per the manufacturer's recommendation, whenever a hard hat:

a. is reported to have received a considerable strike, even if there is no visible damage, and/or,

b. when an equipment inspection reveals cracks, faulty or damaged parts.

d. Storage and Care

i. Store hard hat in a clean, dry place that is out of direct sunlight. Clean only with mild soap and lukewarm water. Do NOT use paints, chemicals, adhesives, gasoline or similar substances to clean the hard hat. Do NOT apply decals or stickers to the surface of the hard hat.

ii. From time to time, a replacement sweat band may be reissued to wearers by request to the office of the Coordinator of Environmental Safety and Health.

iii. At the conclusion of employment, hard hats must be returned to the office of the Coordinator of Environmental Safety and Health for removal from service.

Training

Carroll Community College will train employees in the selection, use, care, and inspection of Personal Protective Equipment (PPE) applicable to their job duties. This training shall be completed before an employee performs related tasks and shall be conducted by a person competent in the subject matter. The training will be refreshed; at intervals stipulated by the current and applicable OSHA standard, or when changes in the workplace or types of PPE to be used render previous training obsolete, or if inadequacies in an employee's knowledge or use of assigned PPE indicate that the employee has not retained the understanding or skill.

All third-party contractors are responsible to ensure their employees are trained, certified, and/or licensed as required by the industry standards and all applicable OSHA standards related to the scope of work.

Record Keeping and Certification

1. Safety Training records for Carroll Community College employees shall include the following:

a. Names of training attendees.
b. The dates of the training sessions.
c. The contents or a summary of the training sessions.
d. The name(s) and title(s) of person(s) conducting the training sessions.

2. Safety Training records shall be maintained for a length of time in accordance with industry and OSHA standards.

3. All third-party contractors are responsible to maintain safety training records for their employees in accordance with industry and OSHA standards.

Revisions:
2023-06: Foot Protection updates – la/rf