

# Safety and Health Policy and Procedure Manual

## PERSONAL PROTECTIVE EQUIPMENT Section 0130

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## SECTION 0130

### I. INTRODUCTION

Basic controls for protecting UNCG personnel from hazards include engineering, education, and enforcement. Through effective engineering controls, most employee hazards can be eliminated. This should always be the first attempt at eliminating a hazard. However, in some cases, due to the nature of the work being performed, engineering controls cannot completely eliminate all hazards such as sawing, cutting, welding, handling chemicals, dusty condition, etc.

Where engineering controls are not feasible to completely eliminate employee hazards, appropriate personal protective equipment must be provided and properly used by exposed UNCG employees. In such cases, the personal protective equipment is the "last line of defense" for safety. As such, any equipment failure or improper use may likely result in employee injury, illness, or death depending on the nature of the hazardous exposure.

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### II. STANDARDS

OSHA 29 CFR 1910 - General Industry, Subpart I - Personal Protective Equipment

<u>OSHA</u>	<u>ANSI</u>
.132 - General Requirements	
.133 - Eye and Face Protection	Z 87.1
.134 - Respiratory Protection (Also <a href="#">UNCG Safety and Health Manual, Section 0080</a> )	Z 88.2
.135 - Head Protection	Z 89.1
.136 - Foot Protection	Z 41.1
.137-Electrical Protection	ASTM(See 1910.137)
.138-Hand Protection	---

OSHA 29 CFR 1926 - Construction, Subpart E - Personal Protective and Lifesaving Equipment

<u>OSHA</u>	<u>ANSI</u>
.100 - Head Protection	Z 89.1
.101 - Hearing Protection (Also UNCG Safety and Health Manual, Section 0110)	---
.102 - Eye and Face Protection	Z 87.1
.103 - Respiratory Protection (Also UNCG Safety and Health Manual, Section 0080)	Z 88.2
.104 - Safety Belts, Lifelines and Hazards	---
.105 - Safety Nets	---
.106 - Working Over or Near Water	---

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### III. SCOPE

This section applies to all UNCG workplaces where UNCG employees are exposed to safety and /or health hazards requiring the use of personal protective equipment to ensure their safety. Each UNCG supervisor is responsible for assessing the workplace hazards, determining the specific personal protective equipment requirements, selecting the necessary equipment, providing the needed equipment, ensuring that all of his or her assigned UNCG employees are properly trained concerning the purpose, use and limitations of the equipment provided, and routinely audit workplace to ensure their assigned employees are using the prescribed personal protective equipment properly.

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## IV. PURPOSE

This section is provided for the use of all UNCG managers, supervisors, and personnel to ensure that the needed personal protective equipment is properly selected, maintained, provided, and used to protect UNCG employees.

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## V. GENERAL REQUIREMENTS

Protective equipment, including personal protective equipment (PPE) for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers must be provided, used, and maintained in a sanitary and reliable condition. Each employee is responsible for the care and condition of equipment that is issued to them. Supervisor must perform necessary checks to insure that equipment is maintained as required and insure that equipment that is damaged is promptly replaced. Supervisors shall not allow employees to conduct tasks without the proper PPE. See [Appendix E](#) -- PPE Checklist, as needed to document inspections.

Protective equipment must be provided by the employee's department wherever it is necessary by reason of hazards of operations or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

Department Heads are responsible for insuring that the appropriate PPE is provided in accordance with this policy. [Appendix G](#) provides information on the amount of money departments are required to provide for the purchase of such equipment.

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## VI. EMPLOYEE OWNED EQUIPMENT

Where UNCG employees provided their own protective equipment, as authorized by their supervisors, the equipment must meet all applicable rules, procedures, standards, codes, and regulations specified in this section. Also, the proper maintenance and sanitation of the equipment must be provided.

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## VII. DESIGN

All personal protective equipment must be of a safe design and construction for the work to be performed. Applicable standards, codes, and regulations must be followed in the design and construction of protective equipment. These standards are listed in [Section II](#), Standards, of this policy.

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## VIII. HAZARD ASSESSMENT

Each UNCG Department must assess the workplace it operates in and determine the hazards present which require the use of PPE. Supervisors, with the assistance of the Office of Safety, must then select the proper PPE, communicate the selections to affected employees in training, and assure the selection fits. The written hazard assessment forms shown in [Appendices A](#) and C **must** be completed with copies forwarded to the Office of Safety.

[Appendix F](#) is provided for the performing of Job Safety Analysis, which is an excellent tool for determining which types of PPE are required for a job task. The Office of Safety can provide training on Job Safety Analysis, upon request.

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## IX. TRAINING

UNCG supervisors must ensure that the proper PPE training is provided for each of their affected employees. Minimum training must include: when PPE is necessary, what PPE is necessary, how to wear PPE, limitations of PPE, and proper care and maintenance of PPE. Employees must demonstrate that they have an understanding and the skills required to use the proper PPE. When there is a change in the workplace, the affected employees must be retrained to use the proper PPE. All training must also be performed using the written certification form shown in [Appendix D](#) - PPE Selection and Training Certification. A copy of this completed form must be forwarded to the Office of Safety. Contact the Office of Safety for information and assistance as needed.

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## X. Eye And Face Protection

There are many potential eye and face hazards throughout UNCG operations and facilities. Protective eye and face protective equipment is required where there is a reasonable probability of injury that can be prevented by such equipment. Eye and face protection used must meet the requirements of ANSI Standard Z 87.1 - Eye and Face Protection. All UNCG employees are required to wear the prescribed eye and face protection to protect themselves from a hazardous environment.

Some UNCG situations where suitable eye protection is required, but not limited to, machine operations involving flying objects and particles, glass, corrosive liquids, compressed air use, injurious radiation, or a combination thereof.

Eye and face protection must meet the following requirements:

- A. Provide adequate protection, including side protection for most tasks.
- B. Reasonably comfortable.
- C. Fit snugly and do not unduly interfere with movements.
- D. Durable.
- E. Capable of being disinfected.
- F. Easily cleanable.
- G. Kept clean and in good repair.
- H. Persons requiring corrective lenses shall wear one of the following:
  - 1. Spectacles whose protective lenses provide the correction.
  - 2. Goggles that can be properly worn over corrective spectacles.
  - 3. Goggles that incorporate corrective lenses.

**Note:** The choice of providing one of these three options will be at the discretion of the Department Head. In either case, eye protection must be worn for tasks that require it.

Every eye and face protector used at UNCG must be distinctly marked to facilitate identification of the manufacturer and ANSI Z 87.1.

Protector limitations and precautions provided by the manufacturer and/or the Office of Safety must be explained to the users by their supervisor and compliance enforced by their supervisor, in accordance with university disciplinary procedures.

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## XI. HEAD PROTECTION

Helmets (safety hard hats) must be provided as necessary for the protection of UNCG employees' heads from impact and penetration from falling and flying objects and from limited electric shock and burns. All such protection must meet the requirements and specifications per ANSI Standard Z 89.1.

Some operations in which head protection may be necessary include construction work, work in areas with overhead bump hazards, work areas where overhead objects may fall on employees' heads, work under scaffolds or ladders, etc. Contact the Office of Safety for information and assistance concerning specific safety helmet requirements.

UNCG employees with long hair and/or beads and loose clothing who work near rotating machine parts or other rotating equipment must protect their hair and/or clothing from contact with moving parts.

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## XII. FOOT PROTECTION

Safety-toe footwear is **required** for UNCG employees who routinely handle (more than once per an 8 hour shift) solid objects weighing 15 pounds or more which can fall on their toes. All such safety-toe footwear (safety shoes) must meet the requirements and specifications of ANSI Standards Z 41.1. Generally, UNCG employees performing routine servicing and maintenance jobs are exposed to foot/toe hazards and need foot protection. Also, most material handling operations involve potential foot/toe hazards and require the use of foot protection. Performing hazard assessment certification for certain operations may reveal that standard safety shoes will not provide adequate protection or may cause an additional hazard. For some types of operations, shoes with metatarsal guards may be required. In special cases, or if the supervisor performing the certification is unsure, please contact the Office of Safety for assistance.

There are no exceptions made for uncomfortable shoes or "medical waivers". If an employee is required to perform tasks requiring safety shoes then the employees must wear safety shoes or other toe protection complying with this policy. If standard safety toe footwear cannot be worn, then the employee will be offered external safety toe caps that may be worn over normal footwear. If an employee cannot wear the required protective equipment to perform a task safely, then the employee cannot be allowed to perform the task. The most important factor in solving the problem of uncomfortable safety shoes is buying shoes that fit and are designed for the type of work the employee performs. To this end, supervisors should make every effort to encourage employees to buy the most comfortable safety shoes.

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## XIII. HAND PROTECTION

Hand protection is required for UNCG employees who are exposed to hazards such as those from skin absorption, severe cuts or lacerations, severe abrasions, punctures, chemical and thermal burns, and harmful temperature extremes. Proper selection must be based on an evaluation of the job to be performed. Use caution in selecting gloves since some chemicals will penetrate the glove material. Contact the Office of Safety for assistance in selecting the proper gloves for the exposure. Additionally, a reference for chemical protection can be found in [Section 0030, Chemical Hygiene Plan, Appendix K](#).

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## XIV. ELECTRICAL PROTECTIVE DEVICES

Rubber protective equipment for protecting UNCG workers from live electrical current greater than 50 volts must conform to the requirements of the following ANSI Standards.

<u>Item</u>	<u>ANSI Standard</u>
Rubber insulating gloves	J6.6-1967
Rubber matting for use around electric apparatus	J6.7-1935 (R1962)
Rubber insulating blankets	J6.4-1970
Rubber insulating hoods	J6.2-1950 (R1962)
Rubber insulating line hose	J6.1-1950 (R1962)

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**XV. RESPIRATORY PROTECTION**

Refer to [Section 0080](#) in the *UNCG Safety and Health Policy and Procedure Manual*.

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**XVI. HEARING PROTECTION**

Refer to [Section 0110](#) in the *UNCG Safety and Health Policy and Procedure Manual*.

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**XVII. BACK BRACE DEVICES**

Back Supports and other types of back braces are not considered PPE and should not be issued to employees. These devices should only be used under the guidance of a medical professional.

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**XVIII. OTHER PERSONAL PROTECTIVE EQUIPMENT ITEMS**

Other personal protective equipment that is not covered by a specific section of this policy could include items listed in [Appendix G](#). If questions arise as to what types of PPE may be available for a specific task, contact the Office of Safety for a consultative meeting.

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Appendix A, Section 0130

<b>THE UNIVERSITY OF NORTH CAROLINA at GREENSBORO PERSONAL PROTECTIVE EQUIPMENT HAZARD ASSESSMENT CERTIFICATION</b>	
Date Started: _____ Date Assessment Completed: _____	
Area or Process in which hazard assessment is being conducted:	
Assessment Conducted by: _____	
Indicate the types of hazards that exist:	
<input type="checkbox"/> Impact	<input type="checkbox"/> Penetration
<input type="checkbox"/> Heat	<input type="checkbox"/> Harmful Dust
<input type="checkbox"/> Light Radiation (optical)	<input type="checkbox"/> Compression (roll over)
<input type="checkbox"/> Other	<input type="checkbox"/> Chemical
Describe the level of risk or seriousness of potential injury to the employee created by:	
Impact:	
Penetration:	
Compression:	
Chemical:	
Heat:	
Harmful Dust:	
Light Radiation:	
Combination of two or more of the above:	



**Analysis of Injury and Accident History:**

**Additional Information:**

	<b>Personal Protective Equipment Assessment &amp; Selection Form</b>	<b>Page 1 of 1</b> <b>Date:</b>
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**Department:**

**Location:**

**Assessor:**

**I. Survey  
Ambient Hazards**

	Noise	Heat	Flying Objects	Dust/Mist	Drowning	Light/Radiation	Electrical	Compression	Chemical	Impact	Penetration	Other
<b>Facility</b>												
<b>Department</b>												
<b>Work Area</b>												
<b>Job/Task</b>												

**Facility**

**Department**

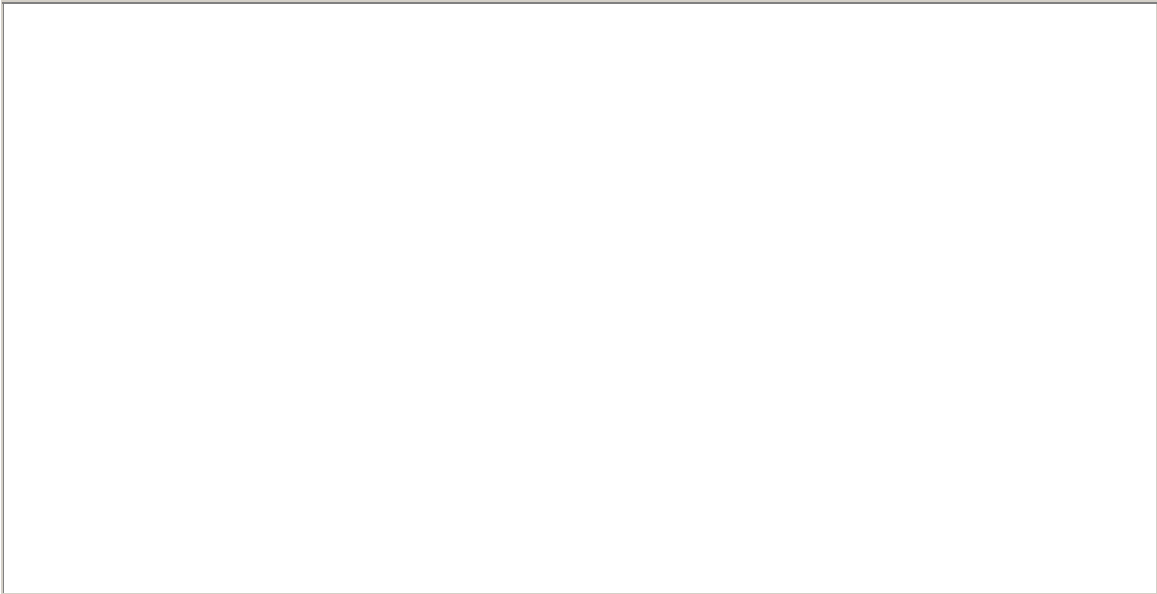
**Work Area**

**Job/Task**



Appendix E, Section 0130

<b>THE UNIVERSITY OF NORTH CAROLINA at GREENSBORO PERSONAL PROTECTIVE EQUIPMENT CHECKLIST</b>				
<b>Date:</b>				
<b>Frequency:</b>				
<b>Inspected By:</b>		<b>Responsible Personnel:</b>		
<b>Location:</b>		<b>Department:</b>		<b>Area:</b>
<b>General:</b>				
Personal protective equipment should be provided to protect workers who are exposed to hazards that could cause injury to eyes, face, head, hands, feet, and body. The equipment should be maintained in a sanitary and reliable condition. The equipment must be capable of protecting hazard due to absorption, inhalation, or physical contact.				
<b>Note:</b> Inspection checklists cannot possible cover all the items and situations which may be encountered in the workplace. Thus, this list can only serve as a guide. Refer to the References on Page 2 for more information and details as well as other reference sources.				
No.	INSPECTION ITEM	YES	NO	COMMENTS
1	Are workplace hazard assessments being conducted and a written certification performed?			
2	Whenever a hazard is present are workers provided and required to use PPE?			
3	Is the PPE maintained in a clean and reliable condition?			
4	Have all workers been trained in the appropriate use, care, maintenance and limitations of the necessary PPE?			
5	Is PPE properly fitted and sized to the user?			
6	Is all employee owned equipment checked to assure its adequacy?			
7	Is the eye and face protection equipment designed and used according to ANSI Z 87.1?			
8	Are workers that are exposed to falling and flying objects provided with head protection that meets the requirements of ANSI Z 89.1?			
9	Is foot protection required for workers that are exposed to the risk of falling, dropping or piercing objects? The foot protection should meet the requirements of ANSI Z 41.1.			
10	Is hand protection required for workers that are exposed to absorption of harmful substances, cuts or lacerations, abrasions, puncture, or burns?			
<b>Notes:</b>				



**References:**

OSHA 29 CFR 1910.132, .133, .135, .136, .138

ANSI Z 41.1

ANSI Z 87.1

ANSI Z 89.1

<b>Submitted by:</b>	<b>Date:</b>	<b>Time:</b>
<b>Submitted to:</b>	<b>Assigned to:</b>	<b>Date:</b>



2. Struck Against (SA)	6. Caught In (CI)	10. Overexertion (OE)
3. Contact By (CB)	7. Caught Between (CBT)	11. Exposure

Appendix G, Section 0130

<b>THE UNIVERSITY OF NORTH CAROLINA at GREENSBORO GENERAL PERSONAL PROTECTIVE EQUIPMENT GUIDE</b>	
<b>EQUIPMENT</b>	<b>USE GUIDE</b>
<b>EYE PROTECTION</b>	
<b>Safety Glasses</b> - 100% State funded, except that employees who wear prescription glasses pay for the cost of the examination.	As required to protect employee from eye hazards, such as, optical radiation or glare when only frontal protection is required. Shaded or special purpose lenses may be required.
<b>Safety Glasses with side shields</b> - 100% State funded except that employees who wear prescription glasses pay for the cost of the examination.	As required to protect employees from flying fragments, objects, large chips, particles, sand, dirt, etc. For severe exposure, add face-shield over safety glasses.
<b>Goggles</b> - 100% State funded	
(1) Chemical/Dust Nuisance	As required to protect employees from chemical splashes, mist, sprays, or nuisance dust. For severe exposure, add over goggles.
(2) Welding Goggles - Indirect Ventilation	As required to protect employees against hazards of welding, cutting, and brazing operations.
(3) Cup Goggles - Direct Ventilation	As required to protect employee against eye hazards.
(4) Cup Goggles - Indirect Ventilation	As required to protect employee against eye hazards.
<b>WELDING HELMET</b> - 100% State funded	As required to protect employee against eye hazards of welding, cutting, and brazing operations.
<b>FACE SHIELD</b> - 100% State funded	As required to protect employee's eyes and face.
<b>HARD HAT</b> - 100% State funded	As required to protect employee's head against impact and falling or flying objects. Class A - used in construction and general industry where there is no exposure to high voltage, electrical shock or burns. Class B - use to protect the head against high voltage electricity. Reference: ANSI-Z89.1-1986.
<b>HARD HAT LINERS</b> - 100% State funded	As required to protect employee against the cold weather if hard had is worn.
<b>RESPIRATORS</b> - 100% State funded	As required to protect employee from airborne contaminants.
<b>GLOVES</b> - 100% State funded	As required to protect employee from physical, biological, chemical, radiation, or electrical hazards. Glove used for electrical protection must be marked as to class of equipment and whether or not they are ozone-resistant, and shall meet the (ASTM) D 120-87 Specification for Rubber Insulating Gloves.
<b>COVERALLS OR APRONS</b>	
<b>Canvas</b> - 100% State funded	As required to protect employee from contact with hazardous substances when canvas provides adequate protection.
<b>Non-Porous (Plastic/rubber)</b> - 100% State funded	As required to protect employee from contact with hazardous substance when plastic or rubber is needed to provide adequate protection.
<b>Leather or Other Flame Resistant Material</b> - 100% State funded	As required to protect employee from hazardous substance when leather is needed to provide adequate protection and when leather or other flame-resistant material is required to protect employee from fire



	hazards.
<b>BODY PROTECTION - 100% State funded</b>  Personal protective footies, vests, aprons, coats, pants, coveralls, and suits in a range of suitable materials and sizes.	As required to protect employee against biological, radiation, physical, or chemical hazards. Base selection on information in the workplace hazards control program. Reference: Appropriate OSHA-NC standard(s) on purchase request.
<b>FOOT PROTECTION</b>	
<b>Safety Shoes - State funds one pair per year, cost not to exceed dollar amount established by the Office of State Budget and Management (\$70.00). Employee may purchase and be reimbursed on From BD-403 or agency may supply under the rules and regulations of State Purchase and Contract Division.</b>	As required to protect employee working in areas where there is a danger of foot injuries due to falling or rolling objects or objects piercing the sole or where protection is needed against electrical hazards. As required to protect employees from solid objects weightin 15 lb. Or greater that (1) are handled routinely each work period (more than once per eight hours) by the employee or other employees, or (2) can fall on the exposed employee's toes from a height exceeding one foot. In general, does not apply to office employees. Protective footwear purchased shall comply with ANSI Z41-1991, "American National Standard for Personal Protection-Protective Footwear.)
<b>Rubber and Specialized Safety Boots - 100% State Funded</b>	As required to keep employee's feet dry when employee routinely works in wet locations such as flooded ditches and to protect from electrical hazards or other hazards requiring specialized safety boots.
<b>SAFETY BELTS, HARNESSSES and LIFE-LINES - 100% State Funded</b>	As required to protect employees from falling while working at elevated (10 ft. or greater) locations not protected by standard guardrails or safety nets or as required when working in confined spaces.
<b>SAFETY NETS - 100% State Funded</b>	As required to protect employees working over 25 feet above ground or water surface where other protective devices are impractical and conventional fall protection system cannot practically be made use of.
<b>EAR PROTECTION - 100% State Funded</b>	As required to protect employee against hearing loss due to noise.
<b>LIFE RING - 100% State Funded</b>	As required to protect employee from drowning.