



Electrical Safety Program

GENERAL

The UNCW Environmental Health & Safety Department (EH&S) is authorized by [UNCW Policy 05.600](#) to develop and manage comprehensive environmental, health and safety programs. Additionally, they are tasked to identify and address regulatory requirements. In that spirit, this Electrical Safety Program has been developed to protect employees by ensuring that all employees understand the Electrical Safety Program before employees perform servicing and maintenance activities. This program is intended to meet the Occupational Safety and Health Requirements for General Industry outlined in 29 CFR 1910.331-.335.

SCOPE

This policy applies to all university employees regardless of status or type of employment. It may be used as minimum guidelines for contractors and/or vendors that are expected to maintain their own safety program.

APPLICATION

This written policy outlines responsibilities, training and program requirements with regard to the Electrical Safety Program.

RESPONSIBILITIES

Each Department shall be responsible for the implementation of the Electrical Safety Program procedures. Employees shall have training in understanding the significance of implementing the procedures. Employees will use the Electrical Safety Program when working in conditions where there is a danger or risk of electrical shock or electrocution. Extension cords shall not be used a permanent wiring. GFCI and/or surge protection is required in “wet locations”.

Each department is responsible for complying with this section.

Electrical safety-related work practices apply to:

- 1) Qualified persons – those familiar with the construction and operation of electrical equipment, and the hazards involved and who have training in avoiding the electrical hazards of working on or near energized parts;
- 2) Unqualified persons – those with little or no such training working on, near or with the following installations:

- a) Premises Wiring: Installations of electric conductors and equipment within or on buildings or other structures and on other premises such as yards, parking lots, other lots and industrial substations.
- b) Wiring for connection to supply: Installations of conductors that connect to the supply of electricity.
- c) Other Wiring: Installations of other outside conductors on the premises.
- d) Optical Fiber Cable: Installation of optical fiber cable where such are made along with electric conductors.

Other work covered by unqualified persons includes work on, near or with:

1. Generation, transmission and distribution installations
2. Communications installations
3. Installations in vehicles
4. Installation in ships or other watercraft

Excluded work by qualified person includes work on or directly associated with the following installations:

1. Generation, transmission and distribution installations for the generation, control, transformation, transmission, and distribution of electrical energy (including communication and metering) located in buildings used for such purposes or located outdoors.

Note 1: Included in this practice is work on or directly with installation of utilization equipment that is not an integral part of a generating installation

Note 2: Work on or directly with generation, transmission or distribution installations includes:

- a) Repairing overhead or underground distribution lines or repairing a feed-water pump for the boiler, in a generating plant.
- b) Line-clearance, tree trimming and replacing utility poles.
- c) Work on electric utilization circuits in a generating plant provided that:

****Such circuits are co-mingled with installations of power generating equipment or circuits; and**

****The generation equipment or circuits present greater electrical hazards than those posed by the utilization equipment or circuits (such as exposure to higher voltages or lack of over current protection).**

2. OSHA 29CFR 1910.268 covers telecommunication communication installations.
3. Installations in vehicles include: ships, watercraft, golf carts (or similar), John Deer Gators (or similar) or automotive vehicles other than mobile home and recreational vehicles.

TRAINING

Those employees facing a higher than normal risk of electric shock, require training. Those employees working in areas not reduced to a safe level by the installation requirements of the National Electrical Code or OSHA General Requirements for Electrical System and Equipment Design have been identified as "high risk".

The department shall provide training so employees understand the purpose and function of the program (knowledge, skills, application, use of equipment)

Content of Training

1. The training will cover the respective OSHA standards, all safety-related work practices and equipment by OSHA Standard 1910.331 through 1910.335 that pertain to their job assignments and may include, but is limited to:
 - a. De-energized parts
 - b. Verification of de-energization
 - c. Re-energization
 - d. Distinguish live parts from other parts
 - e. Work on or near overhead power lines
 - f. Portable ladders
 - g. Conductive apparel
 - h. Housekeeping duties
 - I. Electrical safety interlocks
 - j. Lockout/tagout
 - k. Cord and plug connected equipment including extension cord use
 - l. Eye and face protection
 - m. Safe clearance distances for voltages, and
 - n. Insulated tools
 - o. Use of space heaters (*Appendix A*)
 - p. Use of GFCI and surge protection
 - q. Electrical in wet locations

2. Additional requirements for unqualified persons - In addition to being trained in the safety practices related work, unqualified employees facing a risk of electric shock must have training in any electrically related safety practices not covered in these requirements or the OSHA Standards but which are necessary for employees' safety.

PERSONAL PROTECTIVE EQUIPMENT

UNCW employees working in areas where there are potential electrical hazards must be provided with and use electrical protective equipment appropriate for the parts of the body to be protected and the work performed.

Personal protective equipment shall comply with OSHA Standard 29 CFR 1910 Subpart I.

1. Protective equipment must be maintained in a safe, clean, reliable condition and is periodically inspected or tested, as required by OSHA Standard 1910.137, Electrical Protective Devices.
2. Where the insulating capability of protective equipment is subject to damage during use, the insulating capability of protective equipment is subject to damage during use, the insulating material must be protected by covering with leather or other such appropriate materials.
3. Nonconductive ANSI 289.1, 1986 Class "B" approved head protection must be worn wherever there is danger of head injury from electrical shock or burns due to contact with exposed energized parts.
4. Protective equipment for the eyes must be worn where there is danger of eye and/or face injury from electric arcs and flashes or flying objects resulting from electrical explosions.

Appendix A

UNC Wilmington Space Heater Policy

05.123

Authority: Vice Chancellor Business Affairs

History: Effective October 2009

Source of Authority:

UNC Code, Section 502

Related Links: [Portable Space Heater Usage Request](#)

Responsible Office:

Physical Plant; Environmental Health & Safety

I. Purpose

This document defines UNCW policy regarding the use of portable space heaters on campus.

II. Scope

This policy applies to all buildings on the UNCW campus.

III. Policy

A. **General**

1. The use of portable space heaters on campus is prohibited except in those locations that have been approved as exceptions as described in this policy. Building Occupants are responsible for submitting an exception request for use of a portable space heater.
2. In the case of exceptions, Physical Plant will determine if existing electrical systems can support operation of a space heater, and will respond to electrical problems that could result from use of portable space heaters.
3. Environmental Health & Safety (EH&S) will be responsible for inspections and enforcing this policy. Any portable space heaters found that have not been approved for use will be removed.

B. Requirements for a Heater:

1. Space heaters should be rated not to exceed 120 Volts, 12.5 Amps, 60 Hz, 1500 Watts and 5200 BTU's.
2. Space heaters must be electrically powered; fuel powered or propane space heaters are only permissible upon approval of EH&S.
3. Space heaters must be approved by a recognized testing laboratory, such as Factory Mutual (FM) or Underwriters Laboratory (UL) and must be labeled accordingly.
4. Space heaters must have a thermostat that shuts off the unit when a set temperature is reached.
5. Space heaters must have a tip over shut down feature such that if a space heater is knocked over the unit will automatically shut off.

C. Prohibited Areas

1. Space heaters are prohibited at all times in the following locations:
2. Labs or other areas where flammable liquids or vapors (e.g., gasoline, paint, solvents) may be present.
3. Space heaters must be kept away from combustible materials such as files, curtains, paper, and trash cans.
4. Wet locations (bathrooms, kitchens, laundry areas, etc.).
5. In aisles, exit and high-traffic paths, or any location where it may present a trip hazard.
6. On any elevated surface where the danger of it falling to a lower surface exists.
7. Areas where young children may be present.

D. User Responsibilities

1. If an exception is approved, the user is responsible for the following:
2. Read and follow the manufacturer's operating instructions.
3. Ensure the space heater is kept in good working condition.
4. Replace missing guards and controls at once.

5. Inspect the electrical cord before use. Look for frayed wire or cracked insulation. If there are any defects in the cord or unit, DO NOT USE.
6. Do not overload electrical outlets or else the circuit breakers will trip, which may adversely affect others in the area. If this proves to be a problem for a particular location, portable space heaters will be restricted.
7. Space heaters must be plugged directly into a hard-wired electrical wall outlet or power strip equipped with circuit breaker protection – extension cords may not be used under any circumstance.
8. Do not run a space heater's electrical cord under carpeting or throw rugs, or through doorways.
9. Nothing shall be placed on top of or touching a space heater.
10. Prior to the first extended use and weekly thereafter test the tip-over protection (see below). If inoperable, DO NOT USE.
11. Be alert to any signs of overheating, e.g., smoke, odor, cord or heater casing discolored or hot to the touch, etc.
12. Immediately turn off the heater if any malfunction is suspected and do not resume use until the heater has been replaced or inspected and deemed safe by Physical Plant Electrical Services.
13. If the circuit breaker powering the heater trips, turn off the heater and contact Work Order Administration at extension 23101.
14. The space heater will not be left unattended for more than 10 minutes.

E. Procedure

1. Prior to purchasing or using any portable space heater, department must submit a "Portable Space Heater Usage Request" form to the Physical Plant.
2. Physical Plant will determine if the building HVAC system is unable to maintain space temperature within campus set-point, and if it is not able, forward form to EH&S (Campus building temperature targets are 67 F-to-74 F for the heating season and 73 F-to-79 F for the cooling season).
3. EH&S will conduct a needs assessment to confirm the space is conducive to use of a portable space heater, and contact the requestor.
4. EH&S will label space heaters to indicate approval for use, keep track of exceptions, and will contact the parties requesting the exception with the results of the review.