



# Electrical Safety Program

Developed by:

The Office of Environmental  
Health and Safety

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## I. Introduction

Cleveland State University makes every effort to provide a safe and healthy environment for employees and students. CSU has developed this Electrical Safety Program in compliance with applicable regulations set forth in the Occupational Safety and Health Administration (OSHA) 1910 Subpart S, the National Electrical Code (NEC), and the National Fire Prevention Association (NFPA) 70 and 70E, in order to protect employees from low voltage electrical hazards. Low voltage work is defined as work performed directly or in proximity of systems of six-

- (G) Energized – electrically connected to, or having a source of, voltage.
- (H) Equipment – a general term including material, fittings, devices, appliances, luminaires (fixtures), apparatus, and the like used as a part of, or in connection with, an electrical installation.
- (I) FM – abbreviation for Factory Mutual, an independent product safety testing and certificate company.
- (J) Flash Hazard – a dangerous condition associated with the release of energy caused by an electric arc.
- (K) Ground Fault Circuit Interrupter (GFCI) – a device intended for the protection of personnel that functions to de-energize a circuit or portion thereof within established period of time. GFCI provides additional protection from shocks by deactivating current to equipment when a change in electricity is sensed.
- (L) Grounding – practice whereby electrical equipment is intentionally and securely bonded to the ground, creating a safe, conductive path for electricity.
- (M) Medium Voltage – electrical systems or equipment operating at, or intending to operate at, a sustained voltage of greater than one thousand (1000) volts AC.
- (N) Low Voltage – electrical systems or equipment operating at, or intending to operate at, a sustained voltage of six-hundred (600) volts AC or less.
- (O) Outlet – a point on the wiring system at which current is taken to supply utilization equipment.
- (P) Qualified Person –
  - a. One who has demonstrated skills and knowledge related to the construction and operation of the electrical equipment and installation and has received safety training to identify and avoid the hazards involved.
  - b. Precautionary techniques used for working around the hazards.
  - c. Applicable electrical policies and procedures.
  - d. Proper use of PPE, including arc flash, insulating, and shielding materials.

- e. Proper use of insulating tools and test equipment.
- f. Distinguish exposed, energized conductors and

(B) CSU

## VI. Energized Work

Work on energized equipment at CSU is strictly prohibited unless determined by Electrical Operations for work performed with the equipment energized. In such cases, prior to work being performed on energized equipment, a signed Energized Work Permit must be obtained from Mechanical and Electrical Operations, Facilities Management.

## VII. Lockout/Tagout

All electrical workers shall adhere to the provisions of OSHA's Lockout/Tagout Standard (29 CFR 1910.147, Control of Hazardous Energy).

## VIII. General Provisions – All Employees

- (A) Working on energized or “hot” equipment is prohibited.
- (B) Always follow the manufacturer's instructions for use, maintenance and repair of electrical equipment. It is recommended these instructions be kept on file for reference.
- (C) Inspect all electrical equipment for damage or defects prior to use.
- (D) Replace all electrical cords that are worn, frayed, or otherwise damaged.
- (E) Take electrical equipment that is damaged or not operating properly out of service by tagging the equipment with a tag or sign that says, “DO NOT USE - DEFECTIVE”. Report to your supervisor for repair and or replacement.
- (F) Extension cords shall be used as temporary sources of power only, and shall not be in continuous use for a period of longer than thirty (30) days. CSU Electrical Shop and the Office of Environmental Health and Safety reserves the right to remove any extension cord deemed by them to be unsafe.
- (G) Be sure to not overload an outlet or circuit beyond its rating and capacity by plugging in multiple pieces of equipment into the same outlet.
- (H) Utilize ground fault circuit interrupters (GFCI) in any water-laden or wet areas.
- (I) Multiple power outlets should be plugged directly into outlets and never into an extension cord or another multiple power outlet.

(J) Handle plugs on electrical cords by grabbing the plug itself – never pull the electrical cord as a means to remove it or for any other reason.

(K)



- (C) Safe work practices to be employed
- (D) Personal Protective Equipment to be used
- (E) Insulating materials and tools to be used
- (F) Any special precautions or techniques needed
- (G) If applicable, electrical diagrams

#### XI. Localized Electrical Outage

All employees should report any electrical outages to Facilities Management immediately by contacting FAST Coordination Center at extension 2500 or (216-687-2500) before 4:30 pm, and Campus Police

equipment shall be provided. It is the responsibility of the employing department to facilitate the appropriate training for their employees to safely perform their duties. Training topics should include:

- (A) Understanding specific hazards associated with electrical energy.
- (B) Safety-related work practices and procedural requirements as necessary to provide protection from electrical hazards.
- (C) Identify and understand the relationship between electrical hazards and possible injury.
- (D) Emergency procedures and methods of release of victims from contact with exposed energized conductors or circuit parts.

#### XV. Contacts

For further information on electrical operations at Cleveland State University, please contact Facilities Management, Mechanical and Electrical Operations at extension 6964 or 216-687-6964.

For further information on safety programs at Cleveland State University, please contact the Office of Environmental Health and Safety at extension 9306 or 216-687-9306.

#### XVI. References

National Fire Protection Association 70E, Standard for Electrical Safety in the Workplace, 2018.

Occupational Safety and Health Administration, 29 CFR 1910 Subpart S, Electrical, 1990.

Occupational Safety and Health Administration, 29 CFR 1910T(lt)-3(h )-19(Ar)2 c-Wa7BT1 0 0 1 90teupat