

# Environmental Health and Safety Manual (EHS)

## EHS 118: Electrical Safe Work Practices

Effective: 5/23/2007

Revised:

### Purpose

To protect all ASU employees from potential hazards associated with working on and with electricity at or above 50 volts relative to ground in any work environment and to meet applicable federal, state, and local regulations

### Sources

*29 Code of Federal Regulations § 1910, 147; 1910, Subpart S*

*Arizona State University Electrical Safety Program*

*Arizona State University Lockout/Tagout Plan*

### Applicability

Each ASU employee, including faculty, staff, researchers, and part-time employees, who may come in contact with or work on exposed bare or covered conductors of electrical circuits and equipment while performing their duties or research at all ASU locations.

For the purposes of this procedure the following definitions apply:

#### Conductor

**Bare.** A conductor having no covering or electrical insulation whatsoever.

**Covered.** A conductor encased within material of composition or thickness that is not recognized as electrical insulation.

**Insulated.** A conductor encased within material of composition and thickness that is recognized as electrical insulation.

#### Exposed (as applied to live parts)

Capable of being inadvertently touched or approached nearer than a safe distance by a person. It is applied to parts not suitably guarded, isolated, or insulated.

#### Qualified person

One familiar with the construction and operation of the equipment and the hazards involved.

**Note 1:** Whether an employee is considered to be a “qualified person” will depend upon various circumstances in the workplace. It is possible and, in fact, likely for an individual to be considered “qualified” with regard to certain equipment in the workplace, but “unqualified” as to other equipment. (See *CFR 1910.332(b)(3)* for training requirements that apply specifically to qualified persons.)

**Note 2:** An employee who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is under the direct supervision of a qualified person is considered to be a qualified person for the performance of those duties.

## Policy

The primary method for safeguarding employees from energized electrical circuits or components at all ASU locations will be to deenergize the power source or sources and to lock and tagout the power source to prevent inadvertent energizing of the circuit. If electrical power is needed to perform diagnostic or other work activities, then only experienced and trained personnel will perform such activities and will follow the procedures outlined in the *ASU Electrical Safety Program*.

## Procedures

1. The preferred method of working on any electrical system, component, circuit, or equipment is to de-energize:
  - a. whenever possible all power sources should be identified, de-energized, locked and tagged out before any work is allowed to begin.
  - b. should work be necessary in “live” or “energized” systems, components, or parts, only “qualified” personnel as defined in 29 *CFR* 1910.303 will be allowed to perform such work following those guidelines covered in the *ASU Electrical Safety Program*, general industry practices, and NFPA 70E.
2. Diagnostic and testing on energized circuit and equipment may be performed by qualified, trained, and experienced personnel with the appropriate protective equipment and tools for the task.
3. This policy will not apply to qualified licensed contractors performing professional electrical work under contract, either directly or indirectly with ASU. It will be presumed that the contractor performing such work is qualified, trained, experienced, and licensed to do so in Arizona and will apply a similar standard of practice expected of their profession.
4. ASU faculty members sponsoring graduate students, visiting researchers, or other personnel not identified above as qualified licensed contractors will follow this policy.

## Responsibilities

ASU employees including faculty, staff, researchers, and part-time employees are responsible for the safety and health of their employees and co-workers and must adhere to the requirements of this program. Each chair/dean/director or designee is responsible for identifying personnel working on electrical systems and complying with all training and safety measures identified by the *ASU Electrical Safety Program* and this policy.

The ASU EH&S Department is responsible for compliance with this program by providing policies, programs, and guidelines designed to ensure that safe work practices are developed, employed, and revised as necessary.

## Cross-Reference

For more information, see:

1. [EHS 102](#), “Confined Space Entry”
2. [EHS 103](#), “Hazard Communication Program”
3. [EHS 105](#), “Personal Protective Equipment”
4. [EHS 108](#), “Environmental Health and Safety Training”
5. [EHS 201](#), “Electrical Safety”

and

6. [EHS 202](#), “Decorations and Displays.”