

What services does EHS&EM provide for this Program?

- Monitors the overall effectiveness of the program
- Provides centralized record keeping
- Provides awareness training
- Conducts material inspections
- Assists with developing work practices
- Provides project monitoring

Who may I contact to find out more?

You may contact the Environmental, Health Safety & Emergency Management Office at (434) 395-2940, or on our website at <http://www.longwood.edu/safety/index.html>.



**E N V I R O N M E N T A L
H E A L T H S A F E T Y A N D
S E R V I C E S**

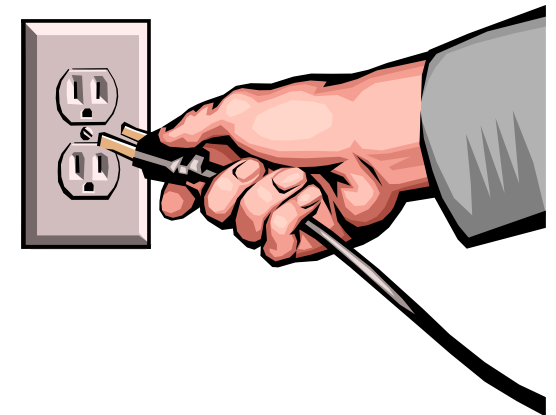
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Management Office**
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**Electrical
Code
Requirements**



General Wiring Design

New electrical wiring, and the modification, extension, or replacement of existing wiring must conform to the requirements of the current National Electric Code, the Virginia Uniform Statewide Building Code, and the Virginia Occupational Safety and Health Act (VOSH). Here are a few

- ◆ **Conductors and equipment shall be acceptable only if “approved”.** Approval is determined by the authority having jurisdiction, or by listing or labeling by a qualified testing laboratory.
- ◆ **Electrical equipment shall be free from recognized hazards that are likely to cause death or serious physical harm to employees.** The is known as the “Electrical General Duty Clause”. The following criteria is used to determine if equipment is free from recognized hazards:
 - ⇒ Suitability for installation and use,
 - ⇒ Mechanical strength and durability,
 - ⇒ Electrical insulation,
 - ⇒ Heating effects under normal conditions,
 - ⇒ Arching effects,
 - ⇒ Classification,
 - ⇒ Other factors.
- ◆ **Listed or labeled equipment shall be used or installed in accordance with any instructions included in the listing/labeling.**
- ◆ **Parts of electric equipment, which in ordinary operation produce arcs, sparks, flames, or molten metal shall be enclosed or separated and isolated from all combustible materials.** Such equipment includes open motors having a centrifugal starting switch, or open motors with commutators or collector rings.
- ◆ **Disconnecting means for motors, appliances, services, feeders, and branch circuits shall be legibly marked to indicate its purpose unless located and arranged so the purpose is evident.**

- ◆ **There must be adequate work space where energized parts are exposed.** This space is determined by the voltage of the energized equipment and certain conditions, starting at a minimum of 3 feet.
- ◆ **Live parts at 50 volts or more shall be guarded against accidental contact by:**
 - ⇒ Approved enclosures,
 - ⇒ Location in a room, vault, or enclosure accessible to qualified persons only,
 - ⇒ Suitable, permanent, substantial partitions or screens,
 - ⇒ Location on a suitable balcony, or
 - ⇒ Elevation of 8 feet.
- ◆ **Entrances to rooms and other guarded locations that contain exposed live parts shall be marked with conspicuous warning signs forbidding unqualified persons to enter.**
- ◆ **Where electrical equipment is likely to be exposed to physical damage, enclosures or guards shall be installed to prevent such damage.**
- ◆ **Conductors entering boxes, cabinets, or fittings shall be protected from abrasion, and the opening shall be effectively closed.** Unused openings shall also be effectively closed.
- ◆ **Ground-fault circuit-interrupters (GFCI) or an assured grounding program are required on all temporary wiring circuits, including extension cords, on construction sites.** GFCI must also be used when extension cords and/or equipment are used in wet or damp locations.
- ◆ **All cord-and-plug connected tools and equipment must either grounded or double insulated.**
- ◆ **Temporary electrical power and lighting is permitted during the period of construction, remodeling, maintenance, repair or demolition only.**
- ◆ **Temporary electrical power and lighting is permitted for a period not to exceed 90 days for holiday decorative lighting and similar purposes.**

- ◆ **Temporary electrical power and lighting is permitted during emergencies and for tests, experiments, and developmental work.**
- ◆ **Flexible cords are not permitted to be used:**
 - ⇒ As a substitute for fixed wiring.
 - ⇒ Where run through holes in walls, structural ceilings, suspended ceilings, dropped ceilings, or floors.
 - ⇒ Where improperly attached to building surfaces.
 - ⇒ Where concealed behind building walls, structural ceilings, dropped ceilings, or floors.
 - ⇒ Where installed in raceways.
- ◆ **Flexible cords shall be protected from accidental damage.** Sharp corners, projections, and pinch points shall be avoided. Strain relief shall be provided.
- ◆ **Hand lamps must have a guard attached to the handle to protect the bulb.**
- ◆ **Transformers shall have the operating voltage of exposed live parts indicated on the equipment, along with warning signs.**
- ◆ **Capacitors shall be provided with an automatic means of draining the stored charge after it is disconnected from its supply.**
- ◆ **Batteries must be stored and charged in a well-ventilated area to prevent the accumulation of explosive mixtures.**
- ◆ **Specially designed equipment and installation techniques are required in hazardous locations where flammable liquids/gases/vapors, combustible dusts/fibers/flyings exist in sufficient quantities to produce an explosion or fire.**
- ◆ The standard also addresses specific purpose equipment, such as electric signs, cranes and hoists, elevators/dumbwaiters/escalators/moving walkways, electric welders, data processing systems, x-ray equipment, induction and dielectric heating equipment, electrolytic cells, irrigation machines, swimming pools and fountains. Additional information is available upon request.