Extension cords provide a convenient method of bringing AC power to a device that is not located near a power source. They are also used as temporary power sources. As such, extension cords are heavily used here on campus. They are also often involved in electrical code and safety violations. Improper use of extension cords can lead to shock hazards. In addition, use of an undersized extension cord results in an overheated cord and insufficient voltage delivered to the device, thus causing device or cord failure and a fire hazard. Extension cords can also be trip and fall hazards, if they are placed in a walkway.

The U.S. Consumer Product Safety Commission (CPSC) estimates that each year, about 4,000 injuries associated with electric extension cords are treated in hospital emergency rooms. About half the injuries involve fractures, lacerations, contusions, or sprains from people tripping over extension cords. In addition, CPSC also estimates that about 3,300 residential fires originate in extension cords each year, killing 50 people and injuring about 270 others. The most frequent causes of such fires are short circuits, overloading, damage, and/or misuse of extension cords.

Below are some recommendations EHS has for extension cord use on campus and at home:

⇒ Extension cords must be approved (by Underwriter Laboratories or another NRTL) and properly maintained with no exposed live parts, exposed ungrounded metal parts, damage, or splices.

⇒ Extension cords must be made of a heavy-duty or extra-heavy-duty rated cable and must be a continuous length. A spliced cord is never permitted.

⇒ Around construction sites, in damp areas, or in an area where a person may be in direct contact with a solidly grounded conductive object such as working in a wash bay, extension cords must be protected by a ground fault circuit interrupter (GFCI). The GFCI can consist of a special circuit breaker, a GFCI outlet, or an extension cord with a built-in GFCI.

⇒ Extension cords should be of sufficient current-carrying capacity to power the device. An undersized cord is a fire hazard.

⇒ Extension cords must be three-conductor (grounded) even if the device has a two-conductor cord. Never use two-conductor extension cords at UT. (Equipment grounding conductors that are part of flexible cords or used with fixture wires shall not be smaller than 18 AWG copper and not smaller than the circuit conductors.)

⇒ Cord repair is not encouraged. In the event it becomes necessary; only qualified personnel may make repairs of extension cords.
Extension Cord Safety

There are very few acceptable combinations of extension cords and devices. Some acceptable combinations are:

- Extension cord to device (electrical equipment)
- Power strip to device
- Surge protector (with cord) to device
- Direct surge protector to extension cord to device
- Direct surge protector to power strip to device

For questions on a particular application of extension cord or power strip use, please contact the Office of Environmental Health & Safety, University Facilities Services Electric Shop or review either the Extension Cord Safety Guidelines or the Electrical Safety Policy # GS 50 on our website at the following link: [http://web.utk.edu/~ehss/safety%20manual/Safetymanual2kj.html](http://web.utk.edu/~ehss/safety%20manual/Safetymanual2kj.html). You can also visit the following websites for more information on extension cord safety:

