Electrical Safety

Proper Equipment
Examine your electrical cords before using them. Make sure to check for cracked, frayed, or otherwise damaged cords as these should be replaced immediately. Touching even a single exposed strand of wire can result in an electric shock or burn. Do not attempt to repair a cord yourself. This work needs to be completed by a qualified electrician. Never plug a cord into an electrical source with wet hands, or if either end of the plug is wet, or if you are standing in water.

Extension Cords
In our labs, sometimes we will need to use extension cords. One thing to keep in mind is that an electrical cord should never be used as a permanent placeholder. An extension cord can still conduct electricity until it has been unplugged from the outlet. All extension cords should be unplugged at the end of your task or when you leave for the day, whichever comes first. To avoid overheating extension cords, make sure that they do not run under furniture or carpeting or behind baseboards. Never file or cut the plug blades or grounding pin of an extension cord or appliance to plug it into an old outlet. Remember that extension cords are meant to be a temporary solution.

Hot Plate Cords
In our labs, hot plates are used in many locations varying from benchtops to inside of fume hoods. Particularly when using a hot plate in a fume hood or against a wall, if you push the hot plate to the back of the hood while the hot plate is still warm, make sure the cord is not touching the hot plate. This can cause damage to the cord as it will melt and the cord will need to be replaced.

Fire at Florida State University
An employee of the National High Magnetic Field Laboratory at Florida State University suffered serious burns after an electrical fire. The employee who has worked as an engineering technician at the MagLab for 10 years, suffered second and third degree burns and was transported by helicopter to a nearby hospital. The NMR wing at FSU was shut down for one day as the Environmental Health and Safety personnel ventilated the building and evaluated the indoor air quality. Even though this employee has had 10 years of experience, electrical fires can happen at any time and we need to prevent them the best we can.
Apply Safety Principles This Christmas Season

Some friendly reminders as you are putting up Christmas lights this holiday season:

- Purchase lights and extension cords that are UL-listed
- Putting indoor-only products outside in the weather can result in electric shock and fire hazards
- Inspect all lights and decorations and extension cords for signs of damage
- Always unplug lights before changing bulbs, replacing fuses, or making any other repairs
- When replacing bulbs make sure to use the correct wattage rating
- Only use lights and decorations in accordance with manufacturers’ instructions
- Verify how many strands of lights it is safe to connect end-to-end. Typically, it is 3
- Always turn off all Christmas light before going to bed or leaving the house
- Every so often check Christmas light wires to make sure they are not warm to the touch
- There are 250 Christmas tree fires and 14 related deaths each year
- Tap down any ground-level extension cords to prevent people from tripping
- Keep all cords away from snow, water and debris
- Do not overload extension cords
- If any cord is hot, unplug it!