Lab Safety Instructions

As a student enrolled in a physics laboratory course, you should be aware of some potential hazards that can arise during lab classes and how to avoid them. Below is a list of situations where problems can arise.

1. **Use of electricity.** Many of the labs will require the use of electrical devices and the wiring of circuits. While you will be working with power supplies that are low voltage, care should be taken when you are wiring the circuits together. Make sure none of the bare connections touch one another. Such a “short” can cause sparks and damage to equipment. Also, exercise care when you are adjusting the circuit or taking measurements. Be careful that you do not touch across any of the bare connections with your hands!! This could result in a painful electrical shock. When making changes to any of the circuits you are assembling, make sure the power supply is turned *off*. If you suspect that a piece of equipment in not functioning properly, notify the instructor or lab assistant immediately and do not proceed with the lab till the equipment has been inspected.

2. **Hot water & steam.** In labs where it is required that you handle hot water or steam, you should be very careful what you touch. A typical setup for the making hot water and steam is to use a Bunsen burner and either a steam generator or open beaker. The steam generator is an aluminum container that gets very, very hot. Do not handle the steam generator till it cools off, and *never* let the generator run out of water; if this occurs, let the generator cool down and add water to it using a beaker before continuing with the lab. Also, when you extinguish the Bunsen burner, make sure the gas supply is shut off completely. Clean up any water spills that occur with paper towels.

3. **Glass thermometers.** The thermometers that are used in our labs contain two types of material: red alcohol and mercury. The big risk here is breakage. When broken, a red alcohol thermometer poses little problem aside from the broken glass itself. However, when a thermometer containing mercury is broken, special cleanup is required. If this occurs to you, do *not* attempt to clean up the mercury yourself. Notify the instructor or lab assistant immediately. Any material the mercury comes in contact with will have to be cleaned and possibly disposed of if cleaning is not possible.

4. **Eye protection** In labs where projectiles are used, eye goggles will be supplied and should be worn at all times while you are in the lab room even if you are not using any equipment.