Safe laboratory practices are essential in carrying out experimental work and are a critical factor in representing professional engineering practice. With this in mind the following safety guidelines apply to all students in the Unit Operations Laboratory (EB1 1016).

1. North Carolina Law requires that every student and teacher wear approved eye protective devices (e.g. safety glasses) at all times in the laboratory when experiments are being performed. Approved safety glasses must have side shields to protect from chemical splashes; typical eye-glasses worn for reading, etc. are NOT acceptable laboratory eyewear. Eye protection safety glasses are provided in the laboratory for student use. A number of vendors are available if you want to purchase your own pair of approved safety glasses.

2. Long pants and closed-toe shoes are required when performing experiments in the laboratory. Sandals, shorts, etc. are not acceptable laboratory dress.

3. It is your responsibility to know the location of all safety equipment, first aid kit, fire extinguishers, and eye wash fountains in the laboratory. Ask Dr. Cooper prior to testing if you are unsure where any of these items are located.

4. Safety information specific to each experiment performed in the lab is given in the experiment manuals located on the course website. It is your responsibility to be familiar with safety aspects of your experiment and this information should appear in your pre-lab document. Your TA or Dr. Cooper will discuss safe operation of the equipment during your experiment to ensure that experimentation is carried out in a safe manner. However, if at any time you are not sure of any operation or suspect a hazard, ask Dr. Cooper or the TA before proceeding.

5. No equipment is to be operated until the approval of the instructor has been obtained at the start of class. Only the equipment pertaining to the assigned experiment is to be operated.

6. No operating equipment will be left unattended. At least two members of the laboratory group must be present while equipment is operating.

7. The written approval of Dr. Cooper is required for anyone to be in the laboratory after hours, on weekends, or on non-scheduled laboratory days.

8. The following activities are prohibited in the laboratory:
   a. Eating/drinking – if you have a closed water bottle, etc. it must be stored outside the lab or remain closed within a backpack.
   b. Sleeping
   c. Horseplay
   d. Smoking/open flames

9. Know the potential hazards of any chemicals you are using. These hazards are described in the materials safety data sheets (MSDS) included in the laboratory’s safety plan, and are also available online at http://www.msdso.org. Wear gloves and other personal protective equipment when handling chemicals as indicated in the chemical MSDS.
10. Use only designated containers and proper disposal methods for waste chemicals. Any spills must be immediately contained, collected and disposed by procedures approved by NCSU’s Environmental Health and Safety department. Information on approved safety procedures related to hazardous chemical handling and disposal is available at http://www.ncsu.edu/ehs/lab.htm. Do NOT pour chemicals down a sink drain! Students in violation of this policy will receive zero credit for their experiment.

11. Keep your working space clean and orderly. It is your group’s responsibility to leave your experimental area clean at the end of the day and points may be deducted from your laboratory report if you do not clean your experimental area before leaving.

12. Any accident or hazardous situation (including broken glassware) must be reported to the TA and Dr. Cooper immediately.

In addition to following the above safety policies, safety involves common sense and sound judgment. Students violating any safety policy, acting recklessly or creating a hazardous situation in the opinion of the instructor will be given one verbal warning. Repeated violations or an extreme initial violation will result in removal of the student from the laboratory and the assignment of either zero credit to the student for the experiment or a grade of F for the course.