

# Africa International College and Africa Community School, Abuja



## **General safety Policy & Laboratory Safety Policy**

## LABORATORY SAFETY

All students must read and imbibe the information in this document with regard to laboratory safety and emergency procedures prior to the first laboratory session. Your personal **laboratory safety depends mostly on YOU**. Effort has been made to address situations that may pose a hazard in the lab but the information and instructions provided cannot be considered all-inclusive.

Students must adhere to written and verbal safety instructions throughout the academic term. Since additional instructions may be given at the beginning of laboratory sessions, it is important that all students arrive at each session on time.

With good judgment, the chance of an accident in this course is very small. Nevertheless, research and teaching workplaces (labs, studio, etc.) are full of potential hazards that can cause serious injury or damage to the equipment. Working alone and unsupervised in laboratories is forbidden if you are working with hazardous substances or equipment. With prior approval, at least two people should be present so that one can shut down the equipment and call for help in the event of an emergency.

Safety training and/or information should be provided by a teacher/lab attendant, teaching assistant, lab safety contact, or staff member at the beginning of a new assignment or when a new hazard is introduced into the workplace.

## EMERGENCY RESPONSE

1. It is your responsibility to read safety and fire alarm posters and follow the instructions during an emergency.
2. Identify the location of the fire extinguisher, eye wash, and safety shower in your lab and learn how to use them.
3. Notify your instructor immediately after any injury, fire or explosion, or spill.
4. Know the building evacuation procedures.

## COMMON SENSE

Good common sense is needed for safety in a laboratory. It is expected that each student will work in a responsible manner and exercise good judgment and common sense. If at any time you are not sure how to handle a particular situation, ask your Teacher or Instructor for advice. *DO NOT TOUCH ANYTHING WITH WHICH YOU ARE NOT COMPLETELY FAMILIAR!!!* It is always better to ask questions than to risk your life or cause harm to yourself or damage to the equipment.

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## PERSONAL AND GENERAL LABORATORY SAFETY

1. Do not eat, drink or smoke while working in the laboratory.
2. Read labels carefully.
3. Do not use any equipment unless you are trained and approved as a user by your supervisor.
4. Wear safety glasses or face shields when working with hazardous materials or equipment.
5. Wear gloves when using any hazardous or toxic agent.
6. When handling dangerous substances, wear gloves, laboratory coats, and safety shield or glasses. Shorts and sandals should not be worn in the laboratory at any time. Shoes are required when working in the machine shops.
7. If you have long hair or loose clothing, make sure it is tied back or confined.
8. Keep the work area clear of all materials except those needed for your work. Coats should be hung in the hall or placed in a locker. Extra books, purses, etc. should be kept away from equipment that require air flow or ventilation to prevent overheating.
9. Students are responsible for the proper disposal of used material, if any, in appropriate containers.

10. If a piece of equipment fails while being used, report it immediately to your laboratory assistant or tutor. Never try to fix the problem yourself because you could harm yourself and others.
11. If leaving a lab unattended, turn off all ignition sources and lock the doors.
12. Never pipette anything by mouth.
13. Clean up your work area before leaving.
14. Wash hands before leaving the laboratory and before eating.

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## ELECTRICAL SAFETY

1. Obtain permission before operating any high voltage equipment.
2. Maintain an unobstructed access to all electrical panels.
3. Wiring or other electrical modifications must be referred to the Instructor or the Facility Manager.
4. Avoid using extension cords whenever possible. If you must use one, obtain a heavy-duty one that is electrically certified, with its own fuse, and install it safely. Extension cords should not go under doors, across aisles, be hung from the ceiling, or plugged into other extension cords.
5. Do not ever modify, attach, or change any high voltage equipment.
6. Always make sure all capacitors are discharged (using a grounded cable with an insulating handle) before touching high voltage leads or the "inner part" of any equipment even after it has been turned off. Capacitors can hold charge for many hours after the equipment has been turned off.
7. When you are adjusting any high voltage equipment or a laser which is powered with a high voltage supply, USE ONLY ONE HAND. Your other hand is best placed in a pocket or behind your back. This procedure eliminates the possibility of an accident where high voltage current flows up one arm, through your chest, and down the other arm.

## CHEMICAL SAFETY

1. Treat every chemical as if it were hazardous.
2. Make sure all chemicals are clearly and correctly labelled with the substance name, concentration, date, and the name of the individual responsible.
3. Do not return chemicals to reagent bottles. (Take only the correct amount required and share any excess).
4. Comply with fire regulations concerning storage quantities, types of approved containers and cabinets, proper labeling, etc. If uncertain about regulations, contact the building coordinator.
5. Use volatile and flammable compounds only in a fume hood. Procedures that produce aerosols should be performed in a hood to prevent inhalation of hazardous materials.
6. Do not allow a solvent to come in contact with your skin. Always use gloves.
7. Do not "smell" a solvent! Read the label on the solvent bottle to identify its contents.
8. Dispose waste and broken glassware in proper containers.
9. Clean up spills immediately.
10. Do not store food in laboratories.



## ADDITIONAL SAFETY GUIDELINES

- Do not do unauthorized experiments.
- Do not work alone in the laboratory.
- Keep your laboratory space clean and organized
- Do not leave an on-going experiment unattended.
- Always inform your instructor if you break a thermometer. Do not clean mercury yourself!!
- Do not taste anything. Do not pipette by mouth; use a bulb.
- Do not use open flames in the laboratory unless instructed by instructor.
- Check your glassware for cracks and chips each time you use it. Cracks could cause the glassware to fail during use and cause serious injury to you or lab mates.
- Always maintain unobstructed access to all exits, fire extinguishers, electrical panels, emergency showers and eye washes.
- Do not use corridors for storage or work areas.
- Do not store heavy items above table height. Any overhead storage of supplies on top cabinets should be limited to lightweight only. Also, remember that a 36" diameter area around all fire sprinkler heads must be kept clear at all times.

- Areas containing lasers, biohazards, radio-isotopes, and carcinogens should be posted accordingly. However, do not post areas unnecessarily and be sure that the labels are removed when the hazards are no longer present.
- Be careful when lifting heavy objects.
- Clean your laboratory bench and equipment, and lock the door before you leave the laboratory.

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