# LAB SAFETY POLICY



## LITTLE FLOWER DEGREE COLLEGE

(Affiliated to Osmania University)

Uppal, Hyderabad

**Managed by Brothers of St. Gabriel Educational Society** 



#### **Preface**

Laboratory and Practical classes are an important opportunity to actively test experimentally the concepts and methods introduced in the curriculum. To ensure a safe and productive environment LFDC covers essential safety protocols and encourages staff and students to adhere to these guidelines. The following regulations are in use in the laboratories of all practical based programs B.Sc. (Physical Science) - Computer, Physics, Electronics, Statistics, B.Sc. (Life Sciences) - Zoology, Botany, Microbiology, Chemistry and Biotechnology. BA (Arts) - Psychology, Mass Communication, (music room) of LFDC. From chemicals to electrical equipment, laboratories encounter a wide array of safety hazards. Hence it is vital to understand the importance of lab safety.

#### GENERAL SAFETY PROCEDURES IN LABORATORY:

- 1. Important to be familiar with the equipment and follow safety procedures.
- 2. Conduct regular inspections of safety and first aid equipment.
- 3. Keep records of all laboratory incidents and inspection dates.
- 4. Be familiar with the location and use of all safety and emergency equipment before laboratory activity.
- 5. Provide verbal and written safety procedures to follow in the laboratory.
- 6. The student must accept responsibility and pay for any damage. she/he causes to any equipment in the laboratories.
- 7. Eating and drinking is not allowed in the laboratory.
- 8. Ensure students wear lab coats, glasses, and hair ties.
- 9. Wash hands before and after entering the laboratory.
- 10. Properly segregate and dispose of all laboratory waste
- 11. Avoid skin and eye contact with all chemicals.
- 12. Adhere strictly to any other additional information provided by the instructors of respective departments.
- 13. Personal belongings must be kept outside the lab.
- 14.Do not work alone in the laboratory.
- 15. Maintain a record of entry and exit

#### SAFETY RULES IN THE CHEMISTRY LABORATORY:

- 1. All chemicals and reagents must be labelled in alphabetical order
- 2. Use proper storage containers.
- 3. Use a chemical fume hood, biosafety cabinet, or window for mixing strong acid bases with water.
- 4. Ensure active experiments are not left unattended.

#### **DEPARTMENT OF MICROBIOLOGY:**

Laboratory precautions are essential to work in the microbiology laboratory. Many of the organisms dealt with within the microbiology course are potential pathogens. Careful techniques are required to safeguard.

## RULES OF MICROBIOLOGY LABORATORY:

- 1. Treat all cultures as potentially deadly pathogens.
- 2. Do not pipette broth cultures by mouth without plugging in its blunt end. A rubber teat or other pipetting device must be used.
- 3. not open cultures (plates and tubes) more than necessary or leave contaminated pipettes on the bench.
- 4. Do not dispose of any cultures in the sink. All contaminated glassware must be placed in the receptacle for sterilization.
- 5. All experiments should have the student's name, date, and lab section.
- 6. Leave the bench clean and tidy after use. Put the materials used on the side table or trolley.

## **BIOTECHNOLOGY LABORATORY SAFETY RULES:**

- 1. Before entering a lab, put on an apron to safeguard your dress.
- 2. Clean the working surface with disinfectants like 95 percent alcohol or dilute detergents before beginning.
- 3. When handling hot beakers and flasks, use hand protection or lab mitts and exercise caution.
- 4. When heating tubes in water baths, make sure the lids are closed and locked.
- 5. Do not pipette out broth cultures, concentrated acids and alkalis by mouth.
- 6. When an organism's culture is spilled, cover the area and disinfect it with ethyl alcohol.
- 7. For bacterial cleansing, use full-strength cleaners and disinfectants phenol, or 70% ethanol.
- 8. Place fire extinguishers in the lab for easy access.
- 9. Before discarding contaminated items, autoclave them for 15-20 minutes at 15-20psi.
- 10.Before discarding loops and tubes, soak them in a 10% disinfectant solution for 30 minutes.

## SAFETY RULES FOR ZOOLOGY LABORATORY:

- 1. Ensure proper labelling of glassware, chemicals, and specimens.
- 2. Avoid mouth pipetting out the chemical solutions, use the pipetting dispenser of pipette aid or bulb.
- 3. Avoid tilting of specimens which contain preservatives like formation.
- 4. Sterilize fingers with disinfectant before pricking with a needle.
- 5. Use a needle destroyer to avoid its reuse and place it in a specified container (yellow) for sharps.
- 6. Use absorbed paper to remove any chemical spill.
- 7. Discard the blood soiled cotton balls and dissected animals in a specified bin.

## SAFETY RULES FOR BOTANY LABORATORY:

- 1. Dress appropriately and wear a laboratory coat while stepping into the lab.
- 2. Perform the experiments attentively while in the lab, do not leave lit spirit lamps or burners unattended or leave an experiment in progress.
- 3. Careful while handling the Microscopes, glass wares, watch glasses and other equipment while in the lab.
- 4. Minimize all chemical exposures and use the equipment only for its designated purpose.
- 5. Handle the sharp and pointed objects with care during the section cuttings.
- 6. Do not touch eyes, nose and mouth while working with plant parts.
- 7. Handle the specimens and slides with care and perform the experiments under proper supervision.
- 8. Long hair and loose clothes must be pulled back and secured from potential capture.
- 9. Always keep the workspace clean before and after the experiment.

#### SAFETY RULES FOR PHYSICS LABORATORY:

- 1. Do not set equipment too close to the edge of the table.
- 2. Never touch a possible live circuit and electrical equipment with wet hands.
- 3. Use lab equipment for the instructional purpose for which they were intended.
- 4. Never look directly in the beam of a laser and light from a lamp used for the experiment.
- 5. Careful when working with apparatus that may be hot. Use tongs or wet paper towels.

- 6. When working with electrical circuits, be sure that the current is turned off before making adjustments in the circuit.
- 7. When the thermometer breaks, inform the instructor immediately. Do not touch either the broken glass or the mercury with bare hands.

## SAFETY RULES FOR ELECTRONICS LABORATORY:

- 1. Wear appropriate Safety Gear like glasses, gloves and anti-static wrist straps to protect against electric shocks.
- 2. Ensure that tools and components are properly stored when not in use
- 3. Verify that all power supplies are set to the correct voltage and current setting before connecting the circuits.
- 4. Never touch live circuits with bare hands and conductive tools
- 5. Always disconnect power before making adjustments or repairs.
- 6. Ensure that the tools are insulated to prevent electrical shock.

#### SAFETY RULES FOR PSYCHOLOGY LABORATORY:

- 1. Do not conduct the experiment without consent.
- 2. Protect confidential data and maintain confidentiality
- 3. Adhere to ethical guidelines established by APA and BPS
- 4. Ensure all staff and students are trained in the correct use of equipment and procedures.
- 5. Make sure the participant is of non-psychology background.
- 6. Age of participant should be according to scale/questionnaire.
- 7. Debriefing to be done to participants if required.

## SAFETY RULES FOR COMPUTER LABORATORY:

- 1. No food items or drinks allowed
- 2. Do not plug too many devices into a single outlet
- 3. Protect computers by using surge protectors
- 4. No pen drive allowed to maintain cyber security, protect data integrity and prevent spread of malware.
- 5. Access to social media is restricted.
- 6. Log out accounts, avoid saving passwords on shared computers
- 7. External devices should not be unplugged as it can result in data loss.

## SAFETY GUIDELINES FOR RADIO ROOM/STUDIO:

- 1. Ensure all electrical equipment is properly grounded to prevent electric shocks.
- 2. Regular inspection of cables, plugs and equipment.
- 3. Keep flammable materials from heat sources.
- 4. Keep cables organized and out of walkways to prevent tripping hazards.
- 5. Keep audio levels at safe volumes
- 6. Limit access to authorized persons only.

## SAFETY GUIDELINES FOR MUSIC ROOM:

- 1. Treat instruments gently to prevent damage
- 2. Store instruments in appropriate cases when not in use
- 3. Perform routine maintenance such as cleaning, tuning and restringing
- 4. Limit access to instruments to trained individuals
- 5. Report any damage to instruments promptly

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