



**CE-311A**

# **Environmental Quality & Pollution**

Monitoring Techniques

**2023 - 2024 (First Semester)**

**General Guidelines and Instructions for  
using Laboratory**

## General Guidelines for using Laboratory

- ✓ Environmental Engineering Laboratory is a place where all (UGs, PGs, Project Employees, Institute Staff, Faculty and Visitors) work together in a healthy working environment.
- ✓ Always use Front Gate of WL-116 beyond office hours (09:00 – 17:00 h; Monday to Friday). You may use the back door during the office hours if it is open.
- ✓ Note that the laboratory area is under CCTV surveillance. Hence, avoid any illegal activities.
- ✓ Your safety is of utmost importance. Hence, it is important that you are always careful and watchful. Your ignorance and carelessness can compromise on your safety as well as that of others.
- ✓ Make sure you are aware of the first-aid facilities.
- ✓ Make sure that you are aware of all entrances and exits to each room, cabin, offices and specific areas in the laboratory.
- ✓ You should not use mobiles for conversation while performing any experiment or participating in any discussion, demonstration, attending to instructions or lectures. Generally, keep your mobile in the silent mode while in the laboratory.
- ✓ Always use laboratory coat (Apron) and shoes while doing wet lab, handling any acids/bases, hazardous/toxic chemicals/reagents/solutions and similar such works.
- ✓ Don't enter with shoes in the restricted areas such as analytical instruments rooms/cabins, microbiology lab, etc.
- ✓ Before starting any work in laboratory make yourself familiar with the equipment, glassware and chemicals to be used. Consult responsible person (TA/Instructor) or laboratory staff before starting any new work in laboratory.
- ✓ Any one working in laboratory must always be aware that the chemicals used are potentially toxic, irritating and flammable. Mishandling of chemicals can be a cause of severe accident.
- ✓ Make sure you have understood application/use and learned all operations, procedures, precautions before using any facility, equipment, glassware, plasticware, etc.
- ✓ Don't change settings (such as temperature, humidity, speed, etc.) of any instrument/ common utility such as incubator, refrigerator, oven, etc. without prior intimation/ consent of the laboratory staff or concerned person (TA/Instructor).
- ✓ Always remove your glassware, chemicals, samples from oven, incubators, refrigerators, etc. as soon as the same are not required to be kept in these common utilities.
- ✓ Always put a note with date whenever any common facility is being used and label your things with date.
- ✓ Do not take/lift or use anything from any table without prior permission of the concerned person(s).
- ✓ Maintain silence and discipline while working in laboratory. Your activities shouldn't disturb others working in the laboratory.
- ✓ If you notice any unknown faces, particularly outside office hours, with conspicuous actions, please inform the concerned person(s).

## Specific Guidelines/Instructions for Students

- ✓ You must have a copy of the laboratory manual. Read it carefully and follow the calendar. Make sure that you complete activities as per the schedule given in the manual. Always keep your copy of laboratory manual while doing Experiments.
- ✓ You will be divided in groups and for every group a TA will be assigned. Know your TA well and ask/consult your TA if you have any doubts regarding laboratory work. TA will be available during scheduled laboratory hours only.
- ✓ Always wear your coat while doing experiments.
- ✓ Bags, books, cell phones, laptops, Walkman, iPods, etc. and any kind of edibles should not be taken to UG/PG or any of the specialized labs.
- ✓ Make sure that you get all required chemicals, glassware, etc. during the scheduled laboratory hours.
- ✓ While heating a solution one should make sure not to overheat it; therefore, vigorous mixing of the solution by shaking or stirring is required. The mouth of the glassware containing the solution to be heated should never be pointed toward anyone.
- ✓ Do not keep plasticware for drying/heating in the oven.
- ✓ Handling of strong acids and bases requires special attention. When diluting concentrated acids, the acid should be poured very slowly into the water and never the opposite.
- ✓ Do not store alkali solution in bottles with glass stopper.
- ✓ Before starting any experiment, it is better to know the properties of chemical used to avoid any accident.
- ✓ Use appropriate glassware/plasticware for weighing, drying, making, transferring, measuring, and storing various kinds of chemicals/reagents/solutions.
- ✓ Use only the space provided while putting your glassware/chemical in oven, incubator and refrigerators. Don't remove anything without asking TAs/ laboratory staff. *Your small mistake can washout someone's hard work of years.*
- ✓ Don't cover unnecessary space in ovens and incubators. Remove your glassware and chemicals/samples as soon as you don't require it further.
- ✓ Submit your reports to concern TAs before the set submission time.
- ✓ Any accompanying person should be asked to wait in the lobby and should not be allowed to enter other portions of the laboratory.

**INDISCIPLINE OF ANY SORT MAY ATTRACT PUNITIVE MEASURES**