INTERNAL QUALITY ASSURANCE CELL Lab Audit Report 2021

The lab audit of one hundred and four (104) laboratories of the University was scheduled from April 8, 2021 to April 9, 2021. The different committees of five members including one IQAC member were formed for conducting the lab audits:

The recommendations and observations of the committee is compiled and detailed report of lab audit of the departments is given below:

Central Instrumentation Laboratory

- 1. Flammable liquids must be in an approved cabinet (if >10 gal. in lab).
- 2. Operational fume hoods must be installed in labs.
- 3. Hazardous chemicals are to be stored outside in fire proof, corrosion proof separate chamber.
- 4. Waste containers are to be appropriately labeled.

Department of Applied Agriculture

- 1. Fire extinguishers should be appropriate, mounted, charged, unobstructed and checked annually.
- 2. Emergency procedures and evacuation plans are to be formulated, practiced and posted in the lab.
- 3. Flammable liquids must be in an approved cabinet (if >10 gal. in lab)
- 4. Acids and bases are to be stored in special corrosive resistant cabinets.
- 5. Areas around eyewash and safety shower are to be regularly checked.
- 6. Hazardous chemicals are to be stored in lab or outside in fire proof, corrosion proof separate chamber
- 7. Shoe racks should be available outside the lab.
- 8. Chemical and biological Spill kits should be available.

Department of Biochemistry

- 1. Fire extinguishers should be appropriate, mounted, charged, unobstructed and checked annually.
- 2. Shoe racks should be available outside the lab.
- 3. All Computers and accessories in the lab should be in working order on UPS with appropriate antivirus.
- 4. Chemical and biological Spill control kits to be procured.
- 5. Disinfectants should be available for decontamination or sanitation use in the laboratory
- 6. The lab fellows should wear soft/cotton clothing neither too loose or too tight must be followed.
- 7. All laboratory waste bins are to be color coded and separate for biomedical waste/hazardous waste/shrap etc.
- 8. Three colored bins/bags/needles disposal and compliance of industrial-waste management rules are to be followed.
- 9. Licensed software must be installed on all the computers.
- 10. Waste chemical disposal system must be available
- 11. Chemicals should not be stored around sinks or drains

- 12. Chemical storage areas should not be near desks or electrical equipment.
- 13. Hazardous or corrosive liquids are not to be stored above eye level.

Department of Botany

- 1. Flammable liquids must be in an approved cabinet (if >10 gal. in lab)
- 2. Acids and bases are to be stored in special corrosive resistant cabinets.
- 3. While in lab soft/cotton clothing should not be either too loose or too tight
- 4. Hazardous chemicals are to be stored in fire proof, corrosion proof separate chamber
- 5. All laboratory waste bins are to be color coded and separate for biomedical waste/hazardous waste/shrapnel etc.
- 6. Three colored bins/bags/needles disposal and compliance of industrial-waste management rules are to be followed.
- 7. Proper waste chemical disposal system must be available
- 8. Shoe racks should be available outside the lab.
- 9. Controlled substances should be secured and inventoried.
- 10. SOPs for chemical and biochemical hygiene is to be prepared and reviewed periodically
- 11. Waste containers are to be appropriately labeled
- 12. Secondary containment is to be used for liquid chemicals.
- 13. Chemical and biological Spill control kits should be available.
 - * A lot of instruments/materials laying in department's corridors and hallway, need to be adjusted.

Department of Chemistry

- 1. Acids and bases are to be stored in special corrosive resistant cabinets.
- 2. All Computers and accessories in the lab must be in working order on UPS with appropriate antivirus.
- 3. All chemical storage areas, refrigerators, cabinets and shelves should be labeled with hazard warnings.
- 4. All laboratory waste bins are to be color coded and separate for biomedical waste/hazardous waste/shrapnel etc.
- 5. Appropriate first-aid kit must be available.
- 6. Areas around eyewash and safety shower are to be regularly checked.
- 7. Biohazard waste should not be over full and should be adequately labelled.
- 8. Chemical and biological Spill control kits are to be made available.
- 9. Flammable liquids must be in an approved cabinet (if >10 gal. in lab)
- 10. Fire extinguishers should be appropriate, mounted, charged, unobstructed and checked annually.
- 11. Hazardous chemicals are to be stored in lab or outside in fire proof, corrosion proof separate chamber
- 12. Height of the heavy objects in the lab must be below five feet and not obstructing the exit point.
- 13. Ice machines should be labeled "Not for human consumption".
- 14. Licensed software must be installed on all the computers.

- 15. Operational fume hoods are to be provided in laboratories where noxious of toxic chemicals are handled.
- 16. Secondary containment is to be used for liquid chemicals.
- 17. SoPs for chemical and biochemical hygiene is to be prepared and reviewed periodically.
- 18. SoPs for handling of cryogenics during storage, transport and usage are to be prepared.
- 19. The fume hood working area is to be cleaned, unobstructed and should not be used as a permanent storage area.
- 20. Three colored bins/bags/needles disposal and compliance of industrial-waste management rules are to be followed.
- 21. Training for Lab Safety is to be given and lab manuals must be available.
- 22. Warning signs are to be pasted appropriately.
- 23. Proper waste chemical disposal system must be available
- 24. Emergency procedures and evacuation plans are to be formulated, practiced and posted in the lab.
- 25. Special containment procedures are to be in place for equipment containing mercury (e.g. thermometers, manometers, pressure gauges, etc.).

Department of Computational Sciences

- 1. Fire extinguishers should be appropriate, mounted, charged, unobstructed and checked annually.
- 2. Appropriate first-aid kit must be available.
- 3. Shoe racks should be available outside the lab.
- 4. Electric cords must be in safe condition.
- 5. Lab furniture is to be in good condition, stable and ergonomically suitable.
- 6. Warning signs are to be pasted appropriately.
- 7. An instructional notice is to be displayed to protect data.

Department of Computer Science and Technology

- 1. Fire extinguishers should be appropriate, mounted, charged, unobstructed and checked annually.
- 2. Appropriate first-aid kit must be available.
- 3. All Computers and accessories in the lab must be in working order on UPS with appropriate antivirus.

Department of Environmental Sciences and Technology

- 1. Secondary containment is to be used for liquid chemicals.
- 2. Flammable liquids must be in an approved cabinet (if >10 gal. in lab)
- 3. Disinfectant is to be present in biological spill kit.
- 4. Chemical and biological Spill control kits are to be made available.

Department of Geography

1. Fire extinguishers should be appropriate, mounted, charged, unobstructed and checked annually.

Department of Geology

- 1. Soft/cotton clothing should not be either too loose or too tight and incidents/accidents are to be recorded.
- 2. Acids and bases are to be stored in special corrosive resistant cabinets.
- 3. Biological cultures must be clearly identified and must be appropriately stored.
- 4. Water baths must be maintained in clean state.
- 5. Ice machines should be labeled "Not for human consumption".

Department of Human Genetics and Molecular Medicine

- 1. Acids and bases are to be stored in special corrosive resistant cabinets.
- 2. Shoe racks should be available outside the lab.
- 3. Equipment manuals must be available.
- 4. Incidents/accidents must be recorded.
- 5. Chemical and biological Spill control kits are to be made available.
- 6. All Computers and accessories in the lab must be in working order on UPS with appropriate antivirus.
- 7. Fire extinguishers should be appropriate, mounted, charged, unobstructed and checked annually.
- 8. Laboratory equipment moving parts are to be guarded (e.g. fan belts, fan blades).
- 9. No food stuffs are to be stored in refrigerator.

Department of Mathematics and Statistics

The lab is in the process of development. The audit of lab is recommended after the setup of the lab.

Department of Microbiology

- 1. Fire extinguishers should be appropriate, mounted, charged, unobstructed and checked annually.
- 2. Appropriate first-aid kit must be available.
- 3. Shoe racks should be available outside the lab.
- 4. Chemical and biological Spill control kits are to be made available.
- 5. Appropriate eye protection, hand gloves, chemical goggles or safety glasses with side shields are to be used at all times by individuals in chemical storage and/or lab areas.
- 6. All laboratory waste bins should be color coded and separate for biomedical waste/hazardous waste/shrapnel etc.
- 7. Three colored bins/bags/needles disposal and compliance of industrial-waste management rules are to be followed.
- 8. Flammable liquids must be in an approved cabinet (if >10 gal. in lab)

Department of Zoology

- 1. Shoe racks should be available outside the lab.
- 2. Operational fume hoods are to be provided in laboratories where noxious of toxic chemicals are handled.
- 3. Acids and bases are to be stored in special corrosive resistant cabinets.
- 4. Three coloured bins/bags/needles disposal and compliance of industrial-waste management rules are to be followed.

- 5. Fire extinguishers should be appropriate, mounted, charged, unobstructed and checked annually.
- 6. Lab furniture is to be in good condition, stable and ergonomically suitable.
- 7. Emergency procedures and evacuation plans are to be formulated, practiced and posted in the lab.
- 8. Appropriate first-aid kit must be available.
- 9. Chemical and biological Spill control kits are to be made available.
- 10. Biohazard waste should not be over full and should be adequately labelled.
- 11. The contents of unattended working containers must be clearly identified or discarded.

Department of Physics

- 1. Acids and bases are to be stored in special corrosive resistant cabinets.
- 2. Aisles and pathways should be wide enough and kept clear to provide unobstructed exit and evacuation.
- 3. All Computers and accessories in the lab must be in working order on UPS with appropriate antivirus.
- 4. All container labels must have the full chemical name with legible labels and identify the hazard class of the chemical
- 5. All hazardous wastes are to be stored in sturdy leak proof containers with closed lid.
- 6. Appropriate eye protection, hand gloves, chemical goggles or safety glasses with side shields are to be used at all times by individuals in chemical storage and/or lab areas.
- 7. Appropriate first-aid kit must be available.
- 8. Areas around eyewash and safety shower are to be regularly checked.
- 9. Chemical and biological Spill control kits are to be made available.
- 10. Fire extinguishers should be appropriate, mounted, charged, unobstructed and checked annually.
- 11. Hazardous chemicals are to be stored in lab or outside in fire proof, corrosion proof separate chamber
- 12. Secondary containment is to be used for liquid chemicals.
- 13. Shoe racks should be available outside the lab.
- 14. SOPs for chemical and biochemical hygiene is to be prepared and reviewed periodically
- 15. Warning signs are to be pasted appropriately.
- 16. Waste containers are to be appropriately labeled

Department of Psychology

Lab provided is not suitable as per the requirement of the department.

Department of PSNP

- 1. Emergency procedures and evacuation plans are to be formulated, practiced and posted in the lab.
- 2. Three colored bins/bags/needles disposal and compliance of industrial-waste management rules are to be followed.
- 3. Chemical and biological Spill control kits are to be made available.

- 4. Incidents/accidents are to be recorded.
- 5. Operational fume hoods must be installed in labs

Department of Pharmacology

- 1. Chemical and biological Spill control kits are to be made available.
- 2. Incidents/accidents are to be recorded.
- 3. Three colored bins/bags/needles disposal and compliance of industrial-waste management rules are to be followed.

Computer Centre

- 1. Warning signs are to be pasted appropriately.
- 2. Shoe racks should be available outside the lab.
- 3. Appropriate first-aid kit must be available.
- 4. Training for Lab Safety is to be given and lab manuals must be available.
- 5. Outlets, cords and extension cords are to be grounded.

Department of Education

- 1. Warning signs are to be posted appropriately.
- 2. Emergency exit is required.
- 3. First-aid kit is to be made available.
- 4. Height of the heavy objects in the lab must be below five feet and not obstructing the exit point.
- 5. Fire extinguishers are to be placed for fire safety.
- 6. Emergency procedures needs to be formulated.
- 7. Testing of portable electrical equipment should be done on regular basis.
- 8. Data safety is to be ensured.
- 9. Usage register of computers are to be properly managed.

Department of Physical Education

This lab is in the process of development. Recommended for audit after its full functioning.

Language Lab

- 1. Appropriate first-aid kit must be available.
- 2. Warning signs are to be pasted appropriately.
- 3. Shoe racks should be available outside the lab.
- 4. All Computers and accessories in the lab must be in working order on UPS with appropriate antivirus.
- 5. Items of portable electrical equipment should have been electrically tested and tagged.
- 6. Lab rules are to be pasted/displayed.

Mass Communication Lab

- 1. Appropriate first-aid kit is to be made available.
- 2. Emergency procedures and evacuation plans are to be formulated, practiced and posted in the lab.
- 3. Shoe racks should be available outside the lab.
- 4. All Computers and accessories in the lab are to be worked in order on UPS with appropriate antivirus.

5. An instructional notice is to be displayed to protect data.

Following points are common for all labs:

- 1. Exhaust fans must be available in all the lab.
- 2. All lab equipment including computers must be under appropriate AMC.
- 3. Shoe racks are to be installed outside labs where required.
- 4. For inflammable/Acids/Bases-special corrosive resistant cabinet may be procured.
- 5. Biohazard pickup has been started for all the biological sciences lab.

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Dean Incharge Academics

Hon'ble Vice Chancellor