

# Safety and Incident Management Plan for Mechanical Engineering Drawing Lab

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## Introduction

The Mechanical Engineering Drawing Lab at Ahsanullah University of Science & Technology (AUST) is designed to provide undergraduate students with practical experience in creating technical drawings and understanding engineering schematics essential for a career in mechanical engineering. The lab is equipped with drafting tables, drawing tools, and computers loaded with CAD software to support learning in drafting, modeling, and design. This document outlines the safety protocols, incident prevention strategies, and emergency response measures for the lab, as required for accreditation.

## Safety Rules and Practices

To maintain a safe learning environment in the lab, the following safety rules and procedures are implemented:

- **Personal Protective Equipment (PPE):** Although the lab generally poses low risk, all students must wear appropriate PPE, such as protective glasses, when using sharp drafting tools.
- **Restricted Access:** Only authorized personnel, including students enrolled in relevant courses and supervised by lab staff, are allowed access.
- **Safe Handling of Tools:** Students must use drafting tools responsibly to avoid injury. Sharp tools should be handled carefully, and all tools should be stored properly after use.
- **Ergonomics Awareness:** Students are advised to maintain proper posture at drafting tables and computer workstations to prevent strain-related injuries.
- **Clear Workspace Policy:** Drawing tables should be kept clean and free of unnecessary items to avoid clutter and reduce accident risks.
- **Electrical Safety:** All electrical equipment, such as computers and lighting, should be handled carefully to prevent electric shock or equipment damage. Only qualified personnel are allowed to repair electrical issues.

# Incident and Accident Prevention Procedures

The following procedures are implemented to minimize the risk of incidents and ensure a safe environment in the lab:

- **Routine Inspections:** The Lab In-Charge conducts regular inspections to ensure that all equipment is safe and operational.
- **Equipment Maintenance:** Drafting and computer equipment are periodically maintained to prevent malfunction and to ensure they are safe to use.
- **Safety Training:** All students receive an initial safety briefing covering safe tool usage, emergency protocols, and general lab safety practices.
- **Emergency Drills:** Regular emergency drills familiarize students with evacuation routes and procedures, ensuring preparedness in case of fire or other emergencies.

## Provisions for Managing Accidents and Health Hazard Conditions

In the event of an accident or health hazard, the following provisions are in place to ensure prompt response and care:

- **Emergency Contacts:** A list of emergency contacts, including the Lab In-Charge, Warden, Assistant Warden, and medical services, is posted prominently in the lab.
- **First Aid Kit:** A fully stocked first aid kit is available in the lab to treat minor injuries, such as cuts or abrasions from drafting tools.
- **Fire Extinguishers:** Fire extinguishers are accessible in the lab for use in case of fire emergencies.
- **Emergency Response Protocol:** In emergencies, the Lab In-Charge should be notified immediately. If necessary, the Lab In-Charge will contact the Warden and Assistant Warden, who are part of AUST's Fire/Disaster Safety Team, to coordinate further action.
- **Evacuation Procedures:** For severe incidents, such as fire or electrical hazards, personnel should follow the designated evacuation route to the assembly point outside the building.

## Roles and Responsibilities

### Lab In-Charge

The Lab In-Charge holds overall responsibility for lab safety and incident management. Key responsibilities include:

- Conducting regular safety inspections and equipment checks.

- Providing safety training to students at the start of each course.
- Responding to incidents and coordinating with the Warden and Assistant Warden during emergencies.
- Reporting safety concerns to the Department Head and ensuring corrective actions are taken.

## **Lab Assistant/Attendant**

Working under the supervision of the Lab In-Charge, the Lab Assistant is responsible for:

- Assisting with the setup and maintenance of lab equipment.
- Supervising students during lab sessions to ensure compliance with safety protocols.
- Reporting any equipment malfunctions or safety issues to the Lab In-Charge.

## **Warden and Assistant Warden**

As part of the AUST Fire/Disaster Safety Team, the Warden and Assistant Warden have the following responsibilities:

- Assisting with evacuation procedures during emergencies.
- Coordinating with external emergency services if necessary.
- Reporting incidents to the Campus Safety Task Force for further review.

## **Lab-Specific Incident Prevention Plan**

The following guidelines apply to the Mechanical Engineering Drawing Lab to ensure safe conduct of activities:

1. **Drafting and Modeling Practices:** Students must exercise caution when using sharp drafting tools. Tools should be returned to their designated storage areas after use to prevent accidental injuries.
2. **Computer-Aided Design (CAD) Workstations:** Students should be mindful of proper posture and screen positioning to avoid strain during prolonged CAD work.
3. **Electrical Equipment Safety:** All electrical devices, such as computers, should be switched off and unplugged when not in use. Only qualified personnel are authorized to repair electrical issues.

## **Conclusion**

The Mechanical Engineering Drawing Lab is committed to maintaining a safe and organized environment for all users. Through established safety protocols, incident prevention practices, and emergency response strategies, the lab minimizes risks and ensures effective response to any incidents. Regular reviews of the safety plan ensure compliance with accreditation standards and adaptation to evolving safety requirements.