Safety and Incident Management Plan

Apparel Manufacturing Lab

Department of Textile Engineering (DTE)

Ahsanullah University of Science and Technology (AUST)

Introduction

Ensuring the health and safety of students, academic staff, and laboratory personnel is a fundamental concern of the Apparel Manufacturing Laboratory under the Department of Textile Engineering (DTE) at Ahsanullah University of Science and Technology (AUST). The laboratory functions as an essential facility for developing practical skills by supporting experiential learning in key apparel manufacturing operations, including fabric cutting, sewing, pattern development, garment washing, dyeing, and finishing. Due to the involvement of machinery and chemical agents in these activities, the adoption of robust safety practices is necessary to prevent accidents and protect all users of the laboratory. This Safety and Incident Management Plan establishes clear guidelines for hazard prevention, safe operational procedures, emergency preparedness, and systematic incident reporting, in accordance with accreditation requirements.

Objective

To prevent and manage laboratory incidents by implementing defined safety practices, risk control strategies, and emergency response mechanisms in compliance with institutional and accreditation requirements.

Laboratory Safety Rules

1. **General Rules**

    - **Personal Protective Equipment (PPE):** All students, faculty, and staff must wear appropriate PPE at all times, including lab coats or aprons, masks (particularly during chemical handling), gloves, and closed-toe, flat-soled shoes.
    - **Laboratory Access Control:** Entry to the laboratory is strictly limited to authorized students, faculty members, and laboratory personnel. Unauthorized access is not permitted under any circumstances.
    - **Dress Code and Personal Safety:** Loose or baggy clothing, dangling accessories, and unsecured long hair are strictly prohibited while operating machinery. Hair must be tied back and personal items secured before beginning any laboratory activity.

- **Food, Drink, and Smoking Prohibition:** Eating, drinking, chewing, and smoking are strictly forbidden inside the laboratory to prevent contamination and safety hazards.
- **Preparation Before Laboratory Work:** All users must read and understand the experiment or task instructions before entering the laboratory and discuss the procedure with their team or instructor as required.
- **Safe Use of Equipment and Chemicals:** Machinery and chemicals must only be operated or handled after proper instruction, training, or demonstration. Mobile phones must not be used while operating equipment or handling chemicals.
- **Housekeeping and Workspace Management:** Work areas must be kept clean, organized, and free of hazards at all times. Any spills, waste, or unsafe conditions must be addressed immediately.
- **Incident and Hazard Reporting:** All accidents, injuries, equipment malfunctions, or unsafe practices must be reported immediately to the laboratory in-charge, instructor, or designated authority.
- **Working Supervision:** No individual is permitted to work alone in the laboratory. Laboratory activities must always be conducted under appropriate supervision.
- **Emergency Awareness and Preparedness:** All laboratory users must be familiar with emergency procedures and the location and proper use of emergency equipment, including fire extinguishers, first-aid kits.

2. Behavioral Rules

- All laboratory users must maintain discipline, follow instructions given by faculty or laboratory staff, and behave in a professional manner at all times.
- Running, horseplay, unnecessary movement, or distracting behavior is strictly prohibited. Full attention must be given to assigned laboratory tasks.
- Follow the instructions of the Lab Assistant/Attendant and Lab In-Charge.
- Laboratory equipment, tools, and materials must be used responsibly and only for their intended purpose. Intentional misuse or damage will result in disciplinary action.
- Each individual is responsible for their own safety as well as the safety of others. Unsafe acts or negligence will be treated as a serious violation.
- Students must cooperate with team members, communicate clearly during operations, and immediately inform supervisors of any unsafe condition or malfunction.

3. **Machine-Specific Safety**

- **Pre-Operation Checks:**
  - ✓ Inspect machines for proper functioning before use.
  - ✓ Ensure all guards, covers, and safety devices are in place.
  - ✓ Report any malfunction, loose parts, or damage to the instructor before starting.
- **Proper Training Requirement:**
  - ✓ Only operate machinery after receiving training or demonstration from a qualified instructor.
  - ✓ Unauthorized or unsupervised operation is strictly prohibited.
- **Personal Safety Around Machines:**
  - ✓ Keep hands, hair, and clothing away from moving parts. Tie back long hair, avoid loose clothing or accessories, and wear close-toed shoes.
  - ✓ Always use tools, pushers, or holders for fabric manipulation; never use fingers near blades or cutting areas, use metallic hand gloves.
- **Operational Safety:**
  - ✓ Do not leave running machines unattended.
  - ✓ Follow correct operating procedures for starting, adjusting, and stopping machines.
  - ✓ Use machines only for their intended purpose; do not overload or force materials.
- **Chemical and Lubricant Handling:**
  - ✓ Follow proper precautions when applying lubricants or cleaning solutions to machines.
  - ✓ Avoid direct contact with hands; use gloves and other protective equipment.
  - ✓ Ensure machines are turned off before any maintenance or cleaning.
- **Emergency Preparedness:**
  - ✓ Know the location of emergency stops, power switches, and fire extinguishers.
  - ✓ Immediately report any accident, injury, or near-miss to the instructor or lab staff.
- **Workspace Management:**
  - ✓ Keep the area around the machine clear of clutter, tools, and personal belongings.
  - ✓ Clean machines and surrounding workspaces after use to prevent hazards for the next user.

2. Safety Procedures and Practices

1. Before Lab Sessions

- The Lab In-Charge ensures all machines are inspected periodically for proper functioning.
- The Lab Assistant/Attendant verifies the availability of first aid kits, fire extinguishers, smoke detector.
- Chemical containers are checked for proper labeling and storage.
- A safety orientation is conducted at the beginning of each semester covering machinery operation and chemical handling.

2. During Lab Sessions

- Continuous supervision by the Lab teacher and Lab Assistant/Attendant to ensure compliance with safety rules.
- Only authorized and trained students are allowed to operate machines and handle chemicals.

3. After Lab Sessions

- All machines must be switched off and cleaned properly.
- Chemicals must be sealed, labeled, and returned to designated storage areas.
- Fabric and paper waste, chemical residues, and other debris must be disposed properly.

3. Provisions in Case of Accidents and Health Hazards

1. Emergency Equipment

- First Aid Kit: Fully stocked and easily accessible.
- Fire Safety Equipment: Fire extinguishers, fire blankets, and alarms installed and inspected regularly.
- Emergency Shut-Off Switches: Clearly marked for machines and electrical systems.

2. Emergency Response

- Minor Incidents:
  - ✓ Immediate first aid provided by the Lab Assistant/Attendant.
  - ✓ Incident recorded in the Lab Incident Report Log.
- Major Incidents:
  - ✓ Immediate notification to the Lab In-Charge.
  - ✓ Activation of emergency response through the AUST Fire/Disaster Safety Team.
  - ✓ Medical assistance arranged if required.

3. **Evacuation Procedures**

- Follow AUST's standard emergency evacuation plan.
- The Lab In-Charge coordinates evacuation procedures.
- The Lab Assistant/Attendant ensures all students exit safely and no one remains inside the laboratory.

4. Roles and Responsibilities

1. **Lab In-Charge**

- Ensure overall compliance with laboratory safety policies.
- Organize regular safety training on machine operation and chemical handling.
- Report emergencies to the Warden/Assistant Warden and ensure timely action.

2. **Lab Assistant/Attendant**

- Implement day-to-day safety practices.
- Conduct safety checks before and after lab sessions.
- Assist in emergency response, first aid, and evacuation.

3. **Students**

- Comply with all laboratory safety rules and procedures.
- Use machines and chemicals responsibly and only as instructed.
- Immediately report unsafe conditions, spills, or incidents to the Lab Assistant/Attendant.

5. Documentation for Accreditation

1. **Safety Rules and Procedures**

- Maintain a comprehensive written safety manual for the Apparel Manufacturing Laboratory.
- Distribute safety guidelines to students and faculty at the beginning of each academic term.

2. **Incident Records**

- Maintain a Lab Incident Report Log documenting all incidents, including date, time, type of incident, cause, and corrective actions taken.

3. **Inspection Logs**

- Document machine inspections, safety equipment checks, chemical safety check and safety training sessions.

Conclusion

This Safety and Incident Management Plan ensures a secure and compliant operational framework for the Apparel Manufacturing Laboratory of the Department of Textile Engineering at AUST. By integrating preventive measures, structured emergency responses, and systematic documentation, the plan safeguards all stakeholders and fulfills accreditation requirements. Regular review and updates of this plan will support continuous improvement in laboratory safety and operational excellence.