

Safety Guidelines

**University of Engineering and Technology,
Lahore**

Safety Guidelines
Version 1

Written by
Dr. Syed Abdul Rahman Kashif
Dr. Naseer Ahmad

Reviewed by
Dr. Naveed Ramzan
Dr. Farhat Yasmeen
Dr. Muhammad Qaiser Saleem
Engr. Asad Masood

Approved by
Dr. Naveed Ramzan

Preface

The University of Engineering and Technology has been established as the torch-bearer of creating innovative engineering community. Its influence spans over decades of providing the industry the best possible individuals who are making a positive mark for the betterment of society.

This handbook provides procedures and guidance for maintaining a safe environment for faculty, staff, students, and visitors at various departments at University of Engineering and Technology, Lahore and its sub campuses. The university will continue to maintain a safe work environment in order to prevent occupational injuries and illness. It is vital that those working within laboratories, whether chemical, mechanical, electrical and biological understand that they may be exposed to additional risks. Individuals in labs play an important role in controlling hazards inside the laboratory and surrounding environment.

The purpose of this handbook is to eliminate and minimize the number of incidents that may occur within university. General guidelines have been presented which are useful in understanding safety requirements at the university. Comments and suggestions regarding the further development and improvement of this handbook are welcome. Please send comments to the Environmental Health & Safety (EHS) Committee for further improvement.

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Objectives of the Safety Policy

The safety policy and handbook for the University of Engineering and Technology, with multiple engineering departments, are designed to achieve the following key objectives:

- 1. Ensure Personal Safety and Well-being:** The primary objective is to provide a safe and secure environment for all individuals within the university community, including students, faculty, staff, and visitors. This encompasses safeguarding against potential hazards associated with various engineering disciplines.
- 2. Prevent Accidents and Incidents:** The policy aims to prevent accidents, injuries, and incidents by establishing clear guidelines, procedures, and best practices for conducting activities within laboratories, workshops, and other engineering-related spaces.
- 3. Promote Safety Culture:** The policy and handbook work in tandem to foster a strong safety culture within the university. By promoting awareness, education, and accountability, they encourage individuals to prioritize safety in all aspects of their work and interactions.
- 4. Comply with Regulations:** The objectives include ensuring compliance with local, national, and international safety regulations, standards, and codes relevant to the various engineering departments. This helps maintain legal and ethical standards in all safety-related matters.
- 5. Provide Department-specific Guidance:** The policy and handbook offer department-specific safety guidelines tailored to the unique hazards and challenges of electrical, chemical, mechanical, and civil engineering disciplines. This ensures that individuals are well-informed about the risks associated with their specific areas of study or work.
- 6. Equip Individuals with Knowledge:** A key objective is to provide individuals with comprehensive information on potential hazards, risk assessment, safe practices, emergency response procedures, and the proper use of personal protective equipment (PPE).
- 7. Facilitate Emergency Preparedness:** The policy and handbook aim to enhance the university community's readiness to respond effectively to emergencies, including fires, chemical spills, accidents, and natural disasters.
- 8. Encourage Reporting and Accountability:** By establishing protocols for reporting unsafe conditions, accidents, and near-miss incidents, the objectives include fostering a sense of responsibility and accountability among all members of the university community.
- 9. Conduct Regular Inspections and Audits:** The policy and handbook support the objective of conducting routine safety inspections, audits, and reviews. These activities help identify

potential hazards, ensure adherence to safety protocols, and continuously improve safety measures.

10. **Promote Continuous Improvement:** By regularly updating the safety policy and handbook based on feedback, incident reports, and evolving safety standards, the objectives include maintaining relevance and effectiveness in addressing emerging safety challenges.
11. **Support Academic Excellence:** Ultimately, the safety policy and handbook contribute to creating a secure environment that enables students, faculty, and researchers to focus on their academic pursuits without compromising their safety and well-being.
12. **Enhance Reputation and Trust:** By consistently upholding a strong safety framework, the university can build a reputation for responsible practices and care for its community members. This fosters trust among stakeholders and potential collaborators.

In summary, the safety policy and guidelines aim to create a holistic approach to safety management within the University of Engineering and Technology. They address potential hazards, provide guidance, and establish a culture of safety that benefits every individual connected to the institution. Recently approved safety policy for the UET, Lahore is available in Appendix A.

Roles and Responsibilities

The Chairman/Chairperson, of each Department of University of Engineering and Technology, Lahore and its sub campuses will establish EHS objectives, and targets in line with the requirements of EHS Policy of the University and will ensure that the targets are being met.

The **EHS Incharge** is responsible for establishing and monitoring the implementation of the EHS within the department and reporting regularly on the progress of implementation to the Chairman.

Teachers and Lab Supervisors are responsible for implementing the EHS policy within their area of responsibility and taking steps to ensure that identified hazards are eliminated as far as reasonably practicable, or controlled using the hierarchy of risk controls.

Students are responsible for following the EHS Policy and procedures and ensuring that their conduct does not endanger themselves, others or the environment.

EHS Committee is responsible for the review and maintenance of the EHS activities and providing EHS support and advice to Officers, Senior management, Deans, Supervisors and other department's EHS Consultation Committees.

All the Departments are responsible for establishing a well-defined safety policy and handbook that is shared and practiced by all the faculty members, staff, students, and lab workers. The policy must be available at the Department website and regular training sessions must be held by the EHS committee to educate faculty members, staff, students, and lab workers. The training schedules must be communicated to the University EHS committee by each department every year. For continuous improvement, risk and safety assessment must be carried regularly, at least once a year, out to identify hazards and control measures required to mitigate and reduce occupational, health and safety risks. The continuous efforts for a safe and healthy workplace and study environment in classrooms and labs are to be ensured by every employee and student.

Key Objectives for Departmental Safety Policy

The policies and procedures in departmental safety manual are to ensure success in protecting the health and safety of all employees. The purpose of the safety manual is to ensure that:

1. Management is committed to the prevention of occupational illness and injury
2. A healthy and safe work environment is maintained
3. Supervisors understand that it is their responsibility to ensure that healthy and safe work conditions are maintained and all employees under their direction are appropriately trained
4. Employees understand that it is not only management, but also the employee's responsibility to work safely and to report all unsafe or unhealthy conditions
5. The rules, regulations, policies, procedures and criteria of the department are clearly defined and easy to understand
6. The rules, regulations, policies, procedures and criteria of the department are communicated to and available to all employees

General Guidelines for Fire Safety

Ensuring fire safety in laboratories at engineering university is crucial to protect students, faculty, and valuable research equipment. The specific requirements for fire safety equipment may vary for each department, but here is a list of common fire safety equipment that should be installed or practiced in laboratory settings.

1. Fire Extinguishers

Portable fire extinguishers suitable for different types of fires, such as Class A (ordinary combustibles), Class B (flammable liquids and gases), and Class C (electrical fires), should be strategically placed throughout the laboratory. The type and number of extinguishers should comply with fire codes. The fire extinguishers must be regularly checked and updated in case of expiry.

2. Fire Blankets

Fire-resistant blankets should be readily available to smother small fires or wrap around a person in case of a clothing fire emergency.

3. Emergency Showers and Eyewash Stations

In chemical laboratories, emergency showers and eyewash stations should be installed to quickly rinse off chemicals in case of accidental exposure to hazardous substances.

4. Fire Alarm System

A reliable fire alarm system with smoke detectors, heat detectors, and manual pull stations should be in place to alert occupants in the event of a fire. Assembly points must be marked and informed to all concerned.

5. Exit Doors

Exit doors should be properly marked. There must be no hurdle in the ways of emergency exit doors.

6. Emergency Exit Signs and Lighting

Clearly marked emergency exit signs and well-lit exit routes should be in place to facilitate safe evacuation during a fire or other emergencies.

7. Fire-Resistant Cabinets and Storage

Chemical storage cabinets and flammable materials storage areas should be designed to resist fire and prevent the spread of flames.

10. Fire Safety Training

Regular fire safety training for laboratory staff, students, and faculty is essential. Training should cover fire prevention, evacuation procedures, and the proper use of fire safety equipment.

11. Fire Safety Plan

Develop and maintain a comprehensive fire safety plan for the laboratory, including evacuation procedures, emergency contacts, and protocols for handling hazardous materials.

12. Fire Safety Inspections

Conduct regular fire safety inspections to ensure that all equipment is in working order and that fire safety measures are being followed.

It's important to consult with local fire authorities and comply with applicable building codes and regulations when planning and implementing fire safety measures in laboratory settings. Additionally, ongoing maintenance and testing of fire safety equipment are crucial to ensure its effectiveness in case of an emergency.

General Safety Guidelines

- Laboratory personnel should know the location of electrical shut-off switches and/or circuit breakers in or near the laboratory so that power can be quickly terminated in the event of a fire or accident.
- Electrical panels and switches must never be obstructed and should be clearly labeled to indicate what equipment or power source they control.
- All electrical equipment should be periodically inspected to ensure that cords and plugs are in good condition. Frayed wires and wires with eroded or cracked insulation must be repaired immediately, especially on electrical equipment located in wet areas such as cold rooms or near cooling baths. Insulation on wires can easily be eroded by corrosive chemicals and organic solvents.
- All electrical outlets should have a grounding connection requiring a three-pronged plug.
- All electrical equipment should have three-pronged, grounded connectors. The only exception to this rule are instruments entirely encased in plastic (such as electric pipettors and some types of microscopes). If equipment does not have a three-pronged plug, replace the plug and cord to ground the equipment.
- Face plates must not be removed from electrical outlets.
- Electrical wires must not be used as supports.
- Extension cords should be avoided. If used, they should have three-pronged, grounded connectors, positioned or secured as not to create a tripping hazard, and ONLY for temporary use.
- All shocks must be reported to the principal investigator or supervisor. All faulty electrical equipment must be immediately removed from service until repaired.
- Electrical outlets, wiring, and equipment within a laboratory or building must only be repaired by trained Electrician for your respective campus or department.
- Electrical appliances must only be repaired by authorized electricians or the manufacturer.
- Unauthorized modifications of electrical appliances is prohibited.
- All the maintenance and repair of the equipment must be logged.
- Proper grounding and bonding of flammable liquid containers should be practiced to avoid the build-up of excess static electricity. Sparks generated from static electricity are good ignition sources.

- Experimental electrical equipment in laboratories must be shielded, insulated, or have appropriate fail-safe devices when energized or in use. Personnel must be proficient in use of the equipment and safety precautions.
- Personnel should be trained in first aid and CPR in case of electrical shock. First aid boxes must be easily available in the Department and be maintained by EHS team.
- Earth leakage circuit breakers must be installed in circuits for human safety.
- Install standard sockets at all the points in the department.
- Every circuit must be essentially protected by circuit breaker, there must not be any hanging wire rather must be properly ducted.
- Never wear rings, watches, bracelets, necklaces, or other electrically conductive jewelry.
- No chatting or gaming is allowed in classes and laboratories
- Inappropriate use of Internet (chatting, gaming and pornography etc.) is strictly prohibited.
- Work space should be clear of unnecessary material such as extra books, papers, purses, and clothes.
- Working alone and unsupervised is forbidden unless getting permission from HSE incharge, security incharge, and safety officer.

Safety Signs and Symbols

Below are some common safety signs which must be displayed at required places for the safety awareness. All the safety committees must ensure that proper safety signs or symbols are displayed. Please be aware of what they mean, and follow any instruction.





Explosive



Flammable



Oxidising



Gas under pressure



Corrosive



Acute toxicity



Health hazard



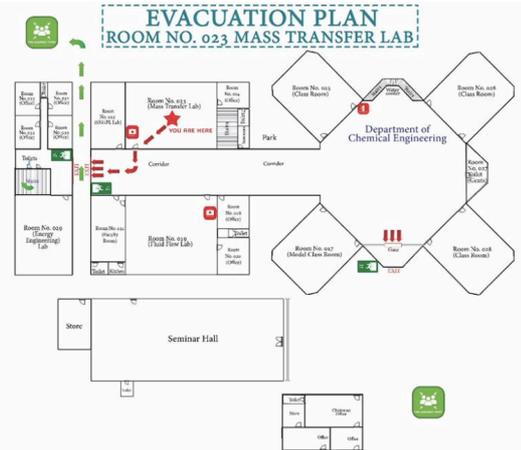
Serious health hazard



Hazardous to the environment

Evacuation Plan

Evacuation plan must be displayed at different locations in the department, office buildings, hostels, cafeterias, and laboratories. A sample evacuation plan of Department of Chemical Engineering is being provided for reference.



Emergency Contact List

All Emergency contact numbers must be displayed in all laboratories, buildings, corridors, hostels, cafeterias, and play areas.

RESCUE	1122
Police Help	15
Anti-Terrorism Force	1717
Admin Office	Phone and Email
Incharge EHS Committee	Phone and Email
Associate Incharge EHS Committee	Phone and Email
Safety Officer	Phone and Email
Electrician	Phone and Email

Safety Guidelines for Ensuring the Safety at Cafeterias, Hostels and Roads

The concern heads monitoring the operation of cafeterias must formulate the safety guidelines which at minimum must address the following consideration for safety policy framework for cafeterias.

1. Health and Hygiene

- Ensure that all staff follow strict hygiene standards, including handwashing and wearing appropriate protective gear.
- Regularly inspect and clean food preparation areas and equipment.
- Implement food safety training for all employees.
- Clearly label menu items with allergen information.

2. Food Quality Control

- Establish procedures for inspecting and storing food items to prevent contamination.
- Monitor food temperature and freshness regularly.

3. Fire Safety

- Install and maintain fire extinguishers and smoke detectors.
- Conduct fire drills and educate staff on evacuation procedures.
- Provide clear signage for emergency exits and evacuation routes.
- Maintain clean and well-lit dining areas to prevent accidents.
- Address customer complaints or safety concerns promptly.

4. First Aid and Medical Supplies

- Maintain a well-stocked first-aid kit.
- Ensure that staff are trained in basic first aid.

5. Gas Cylinders

- All gas cylinder used for cooking must be regularly checked and status is logged.
- All standard safety procedures are compliance and logged.

6. Environmental Sustainability

- Promote sustainable practices, such as recycling and reducing single-use plastics.

7. Employee Safety

- Implement workplace safety training programs.
- Ensure proper ergonomics for staff working in the cafe.

8. Compliance with Regulations

- Stay updated on local, provincial, and national regulations related to food service and safety.
- Obtain all necessary permits and licenses.

9. Regular Audits and Inspections

- Conduct regular safety audits and inspections to identify and address potential hazards.

10. Continuous Improvement

- Regularly review and update the safety policy framework based on feedback, incidents, and changing circumstances.

11. Traffic and Road safety

- The safety officer and concerns will display all the required traffic signs and will circulate the traffic and road safety policy with all the departments.

Customize this framework to meet the specific needs and regulations and ensure that all staff are well-trained in safety procedures to maintain a secure and healthy environment.

Appendix A



Occupational Health and Safety Policy



1. PURPOSE

This policy underscores UET Lahore's dedication to establish a secure and wholesome environment for both work and academic pursuits across its premises.

2. STATEMENT

The University of Engineering and Technology Lahore holds a preeminent status as a Pakistani institution with a globally acknowledged reputation for technical and engineering education distinguished by its multifaceted campuses, diverse array of engineering programs, varied research centres, and its pivotal role in facilitating the establishment of novel engineering universities in the nation. Continuing its pursuit of making a substantial, pragmatic contribution to a secure society within a sustainable global economy, fostering the generation and transformation of knowledge to resolve real-world challenges, it remains an imperative aspect of all undertakings to adopt prudent measures aimed at cultivating a culture of health and safety within its departments and campuses. This policy encompasses all activities conducted under the auspices of UET Lahore.

UET is committed to endowing its employees, students, contractors, and guests with an environment that is both secure and conducive to the pursuit of excellence. Our overarching goal is to achieve "Zero Harm," under the unwavering belief that no individual should encounter harm while engaging in work, study, or visits to the Campus. The ensuing principles form the bedrock of our pursuit of "Zero Harm": -

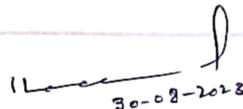
- ↓ People represent our most invaluable asset, and we are steadfast in safeguarding the health and safety of every individual within the workplace.
- ↓ Every individual bears a responsibility for safety—both for themselves and others.
- ↓ Prevention of injuries and the cultivation of an environment free from incidents are vigorously pursued.
- ↓ Effective communication and consultation stand as pivotal tenets in our collaborative efforts towards a safer workplace.

UET remains resolute in perpetually refining its processes, incorporating health and safety into every facet of its operations. We will accomplish this by:

- ↓ Establishing and maintaining a robust framework that orchestrates health and safety across all campuses and locations, ensuring compliance with legal and regulatory requisites.
- ↓ Setting quantifiable targets and objectives to manage activities of heightened risk and to enhance awareness regarding health and safety.
- ↓ Advocating a proactive health and safety management system, underpinned by efficient communication and consultation, systematic hazard identification, assessment, and control, while fostering innovative approaches.

As an institution of technical and higher education, UET acknowledges its obligation to equip all personnel, students, and visitors with pertinent health and safety knowledge, applicable both during their tenure and beyond their association with the institution.

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3. SCOPE

This policy extends to all staff members, students, visitors, and contractors engaged in UET Lahore's campuses and undertakings.

4. RESPONSIBILITIES FOR IMPLEMENTATION AND KEY STAKEHOLDERS

- University Syndicate
- Vice Chancellor
- University Campus Safety Committee
- Campus/College Safety Committees
- Departmental Safety Committees
- Heads of departments / administration units
- Project Director
- Resident Officer
- Security Officer
- Departmental Health and Safety Representatives/Incharges/focal persons
- Supervisors
- Workers
- Students

5. INTEGRATION OF INTERNATIONAL BEST PRACTICES

Acknowledging the significance of aligning with international benchmarks, UET Lahore shall integrate the following practices into its health and safety framework:

- ⚡ Regularly reviewing and adopting best practices from global health and safety standards to enhance the effectiveness of our approach.
- ⚡ Collaborating with international partners, institutions, and bodies to exchange insights, experiences, and advancements in health and safety methodologies.
- ⚡ Emphasizing the training and development of our personnel, fostering a culture of continuous improvement and learning in line with international standards.
- ⚡ Benchmarking against globally recognized metrics to gauge the institution's progress and identify areas for further enhancement.
- ⚡ Staying updated with evolving international regulatory frameworks and guidelines to ensure our policies remain current and relevant on a global scale.

6. REVIEW

This policy will undergo regular reviews to align with legislative and organizational developments within the university, with scheduled reviews conducted every two years.

Ilaco 30-08-2023
Prof. Dr Naveed Ramzan
On Behalf of Campus Safety Committee

30/08/2023
Prof Dr. Habib ur Rahman
Vice Chancellor
UET Lahore