

WORKSHOP SAFETY HAND BOOK



UNIVERSITI KUALA LUMPUR

Malaysian Institute of Marine
Engineering Technology

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FOREWORD



This handbook provides a guideline for staff and students to ensure and maintain safe working conditions and to promote safe working practices at UniKL MIMET's workshops. We hope that implementation of these safe practices will set a good example for the entire university community.

UniKL MIMET recognizes its responsibility to provide a safe and healthy environment for staff to work and for students to learn. This shall include making reasonable efforts to promptly investigate and address health and safety issues, not requiring staff and students to perform tasks that are dangerous to their health and safety without adequate training and safety equipment as determined by applicable state and federal laws, and making information on hazardous materials readily accessible.

In addition to following the guideline in this handbook, everyone is encouraged to adopt the thinking of injury and illness prevention. Prevention of hazards will always be preferable to protection from hazards, and part of UniKL MIMET's safety focus is to eliminate hazards rather than just require the wearing of personal protective equipment. It is implied in this handbook that the management, staff and students share the responsibility for establishing and maintaining the safest possible workshop environment for all. Correspondingly, everyone must act in a safe and responsible manner at all times, and report to management any situations which might lead to injury or illness.

All of us must practice safe work habits at all times. Only a diligent effort on everyone's part will prevent injuries and illnesses. Accidents don't just happen, many injuries and illnesses are commonly caused by unsafe acts or conditions, and can be prevented by using good judgment.

All staff and students should become familiar with the contents of this handbook as it pertains to their particular workshop areas.

Assoc. Prof. Zainorin Mohamad
Head of Campus/Dean
UniKL MIMET.

INTRODUCTION

The procedures in this hand book outline the safety requirements necessary to prevent accidents which may cause injury to people or damage to property.

The hand book contains the safety procedures, safety rules and regulations. It serves also as a simple hand book which will be given to all students and personnel engaged in the workshop or construction site.

It is the duty of every person to comply with the requirements of the safety rules and procedures specified in this hand book. This hand book complies with the Factories and Machinery Act 1967, Building Operations Works of Construction Safety Regulations 1986 Malaysia and The Salient Provisions of the Occupational Safety and Health Act 1995, published by Department of Occupational Safety and Health (DOSH).

If any dispute regarding safety aspect arises, The Government Regulations shall prevail.

GENERAL REGULATION



Figure 1: Safety sign inside workshop

Anybody who works on site is responsible to observe the safety standard and rules, and to point out any violation on safety, whenever noticed, immediately to any other personnel. These are few safety regulations that need to be followed:

Briefing on safety requirements and safety/first aid training.

- Follow strictly all safety instructions from lecturer, safety officer and technical officer.
- Before any work is carried out in the workshop, permission must be obtained from the technical officer.
- Taking action to avoid, eliminate or minimize hazards of which they are aware.

GENERAL REGULATION

- Pay attention to warning signs, barricades and other notices.
- Do not remove any safety measures before the work is completed and the relevant instruction is given by Person in Charge (PIC).
- Regard all substances as hazardous unless there is definite information to the contrary.
- Take additional care when carrying or moving any potentially hazardous material or substances.
- Being familiar with emergency and evacuation procedures and the location of, and if appropriately trained, in the use of, emergency equipment.
- Keep all fire-escape routes completely clear at all times.
- Ensure all safety equipment remains accessible to the workshop personnel at all times.
- When encountering an unsafe working condition, point this out immediately to your supervisor or Person in Charge.

ATTITUDE IN THE WORKSHOP

- Never run and play in the workshop.
- Never indulge in reckless behavior in the workshop.
- Do not handle, store or consume food or drink in the workshop.
- Do not store food or drink in a refrigerator which is used to store workshop materials.
- Do not smoke within workshop or university area.
- Safety must be given priority in any condition.
- Do not violate any safety rules.
- Disciplinary action will be taken against violators of safety rules.

ATTITUDE IN THE WORKSHOP



FOODS ARE PROHIBITED INSIDE THE WORKSHOP AREA BECAUSE IT IS EXPOSED TO POLLUTED AIR CONTAINING RESIDUALS AND CHEMICAL SUBSTANCES

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment (PPE) is used to protect person from any injuries that can affect body such as chemical, radiation, sound, flame, dust and etc. PPE is compulsory in all workshops and construction sites according to Occupational Safety and Health Act Part IV.

PERSONAL PROTECTIVE EQUIPMENT

However, PPE must be used in a right way or it will not serve the function properly. It shall be the duty of everybody to ensure, as far as is practicable, the safety, health and welfare at work.

Students need to follow the regulation for PPE:

- Never wear casual clothes such as jeans, shirt, slippers, casual shoes and jewelries in the workshop.
- Ensure that personal clothing is suitable to the workshop conditions, safety footwear with steel capping. Thongs or open footwear should not be worn in the workshop area.
- Always wear eye protection when using power-operated hand or machine tools that could lead to eye damage.
- Use protective clothing and devices appropriate to the type of operation being carried out, giving due consideration to the work being carried out in the vicinity.
- Hearing protection should be worn when using high frequency machinery.

PERSONAL PROTECTIVE EQUIPMENT

BODY PROTECTION

Hazards:

Temperature extremes, chemical or metal splash, spray from pressure leaks or spray guns, impact or penetration, contaminated dust

Protection:

Overall / Coverall



Official Overall for UniKL MIMET

PERSONAL PROTECTIVE EQUIPMENT

HAND AND ARMS PROTECTION

Hazards:

Abrasion, temperature extremes, cuts and punctures, impact, chemicals, electric shock, skin infection, disease or contamination.

Protection:

Gloves, gauntlets



Wear gloves when using plasma arc cutting



Welding gloves



Chemical gloves



General purpose

gloves

PERSONAL PROTECTIVE EQUIPMENT

FACE AND EYES

Hazards:

Chemical or metal splash, dust, projectiles, gas and vapour, radiation.

Protection:

Safety spectacles, goggles, face shields, visors.



Wear welding helmet when welding

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Face shield



Welding helmet



Safety goggle

Safety

PERSONAL PROTECTIVE EQUIPMENT

FEET AND LEGS

Hazards:

Wet, electrostatic build-up, cuts and punctures, falling objects, metal and chemical splash, abrasion

Protection:

Safety boots and shoes with protective toe caps



PERSONAL PROTECTIVE EQUIPMENT

HEAD

Hazards:

Impact from falling or flying objects, risk of head bumping, hair entanglement.

Protection:

A range of helmets and bump caps.



Various types of head protection –

Mines Labors Helmets

- Load Carrier Labor Helmets
- Fiber Glass Helmets
- Ultra Helmet with Backside Gears
Helmet with Ear Muffs
- Helmet with Visors Two Wheeler Riders Helmets

ACCIDENTS

In case of accidents, stay calm and do the following:

- Secure the accident site
- Determine the severity of the injuries
- For light injuries, take the victim to the safe place
- Notify your supervisor or Safety Officer
- If the injured person is unconscious and/or is unable to move, notify the Person In Charge and call for help.
- If necessary, do the lifesaving immediate action
- Report all incidents, hazards and 'near miss' incidents that happen



Figure 2: Accidents and Injury Statistics Board

SAFETY / EMERGENCY EQUIPMENT

NAME / PICTURE	FUNCTION	PLACE
 Fire extinguisher	To extinguish or control small fire often in emergency situation	Inside workshop / near high flammable equipment Outside workshop / near fire hose reel
 Fire blanket	To extinguish small fire (starting fire)	Inside workshop / attach to the wall
 Fire hose reel	To extinguish bigger fire for a long time	Outside workshop / near exit

HOUSEKEEPING

Housekeeping is an important component in the workshop to ensure risks of injury from potential hazards in the environment are controlled. The following precautions are to be taken to ensure the safety of personnel within the workshop:

- Floors are to be kept tidy and dry
- Store all tools and equipment after use
- Benches are to be kept clean and free from chemicals and apparatus that are not being used.
- Aisles and exits are to be kept free from obstructions.
- Access to all emergency equipment (fire extinguishers, first aid kits) is to be kept free from obstruction.
- Work areas and equipment are to be thoroughly cleaned after use.
- If last to leave the workshop, make sure all equipment is turned off.



Inspection after housekeeping by lecturer

DO AND DON'T S



Proper housekeeping



Bring foods and beverages into workshop



Use proper PPE when handling machinery



Expose face to heat or spatter



Arrange properly all tools and equip-



Leave tools and equipment scattered

DO AND DON'T S



**Safety briefing by
lecturer**



Misuse of equipment



**Wear mask and gloves
when handling chemicals**



Wrong parking area



**Proper arrangement
of tools**



Playing around workshop

WORKSHOP SAFETY HAND BOOK

SAFETY COMMITTEE
UNIVERSITI KUALA LUMPUR
Malaysian Institute of Marine
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