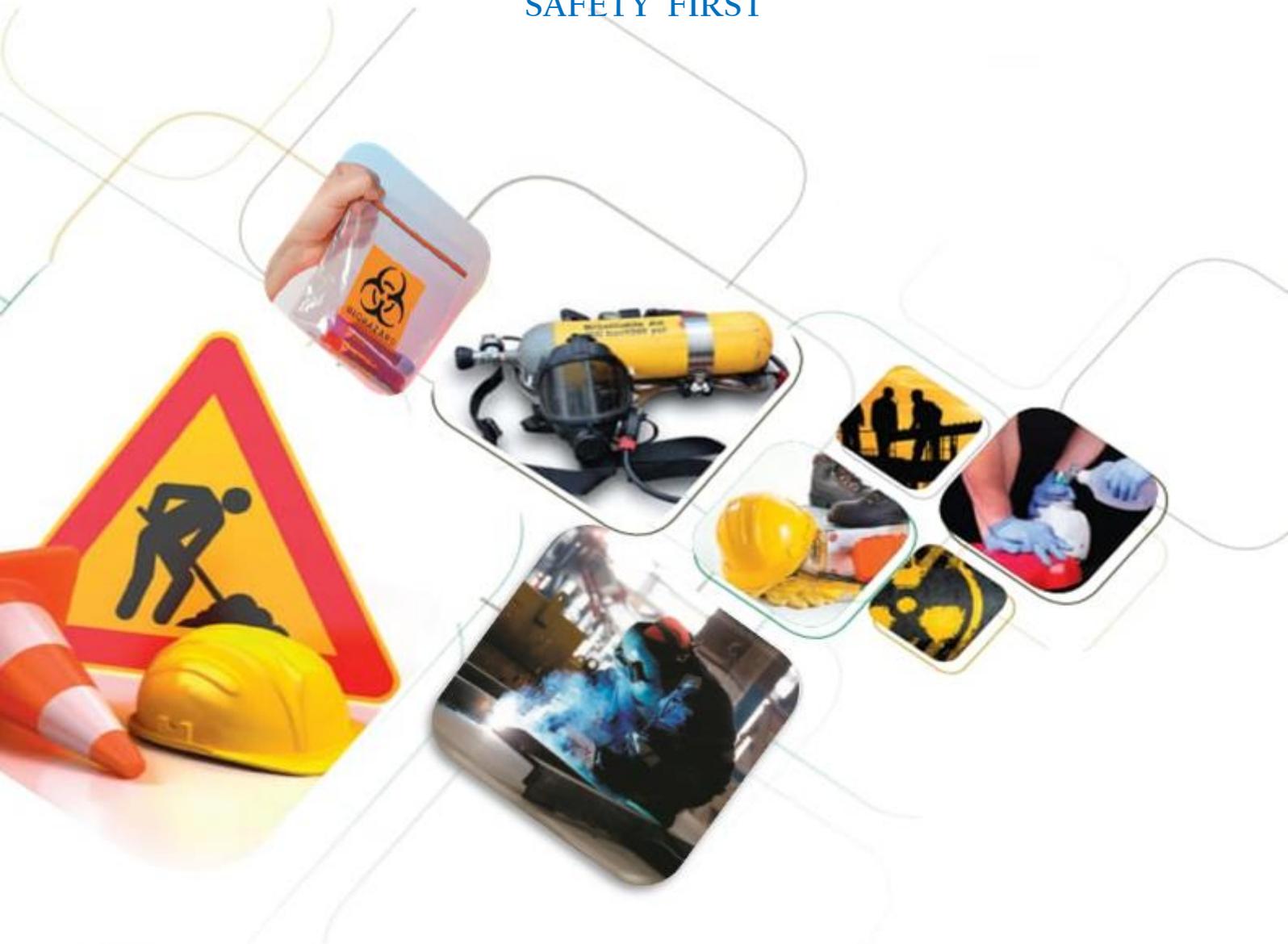


Occupational Safety and Health in the Workplace

SAFETY FIRST



DEFINITION OF SAFETY

A SET OF PREVENTIVE MEASURES INTENDED TO PROTECT PERSONS FROM HAZARDS AND TO AVOID INJURIES/DEATHS AND PROPERTY DAMAGE.

SAFETY
OBJECTIVES

SETTING
PROTECTION

FACILITY
PROTECTION

INDIVIDUALS
PROTECTION



**TYPES
OF
RISK**



FIRE

1



ELECTROCUTION

2



Natural hazards

3



PHYSICAL

4



CHEMICAL

5



WORK SPACE

6



PUBLIC SITES

7





(1) FIRE DRILL

COOLING

TO REDUCE THE HEAT OF THE FLAME BY WATER SPRAY THAT IS EJECTED INTO THE FIRE AND THIS METHOD DEPENDS MAINLY ON THE ABILITY OF WATER TO ABSORB THE HEAT OF THE BURNING SUBSTANCE.

SMOTHERING

THE FIRE IS SMOTHERED BY A COVER THAT CUTS OFF THE OXYGEN SUPPLY AS FOLLOWS:

- 1) CLOSING THE VENTILATION OUTLETS AT THE FIRE SITE TO REDUCE THE OXYGEN SUPPLY.
- 2) COVERING THE FLAMMABLE SUBSTANCE WITH CHEMICAL FOAM.
- 3) DISPLACING THE OXYGEN WITH VAPOR, CARBON DIOXIDE, DRY CHEMICAL POWDERS OR HALOGEN VAPORS.

STARVING

THE FIRE IS STARVED BY REDUCING THE AMOUNT OF FLAMMABLE MATERIALS (SPLITTING THE FIRE INTO PARTS).





STEPS TO FOLLOW AT FIRE EMERGENCY

BREAK GLASS FOR FIRE ALARM •
CALL THE EMERGENCY IMMEDIATELY. •
(UNIVERSITY OPERATIONS UNIT – 0112590222 / CIVIL •
FOLLOWS: DEFENSE 998).

EXTINGUISH IF POSSIBLE USING THE NEAREST FIRE ■
EXTINGUISHER AS

- 1 HOLD THE FIRE ■
EXTINGUISHER WELL
FROM THE HANDLE
- 2 PULL THE SAFETY PIN ■
OFF
- 3 AIM THE EXTINGUISHER ■
NOZZLE AT THE BASE OF THE
FLAME
- 4 SQUEEZE THE HANDLE TO USE ■
THE EXTINGUISHER
- 5 SWEEP THE EXTINGUISHING ■
AGENT AT THE BASE OF THE
FIRE LEFT AND RIGHT
- 6 MAKE SURE THAT THE PLACE WHERE ■
YOU
ARE STANDING IS NOT HAZARDOUS AND
THAT YOU CAN ESCAPE IF THE FIRE
SPREADS
- 7 USE THE MANUAL FIRE EXTINGUISHER ■
OUTDOORS WHILE STANDING 2-3 M.
AWAY FROM THE FIRE IN WIND
DIRECTION
- 8 REMOVE THE CURTAINS AND OPEN THE ■
ROOM FOR VENTILATION AND TO LET
OUT THE SMOKE

HEAD IMMEDIATELY TO THE EVACUATION POINTS AND ■
REGISTER YOUR NAME ON THE LIST OF THOSE PRESENT.



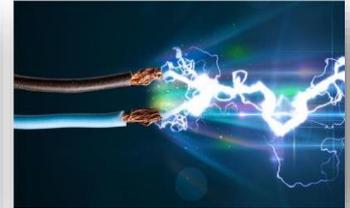
(2) ELECTRICAL HAZARDS

ELECTRICAL MATERIALS

ELECTRICITY IS ONE OF THE SOURCES OF ENERGY AND POWER THAT MADE LIFE EASIER. DESPITE THE MANY BENEFITS OF ELECTRICITY FOR INDIVIDUAL AND SOCIETY, IT COULD BE HAZARDOUS TO PEOPLE'S LIFE AND PROPERTIES; IT COULD CAUSE FIRE OR DEATHS IF SAFETY MEASURES ARE NEGLECTED WHEN POWER GRIDS AND WIRING ARE UNDERWAY OR WHEN ELECTRICITY IS USED IN GENERAL.

WHAT TO DO IN AN ELECTRICAL EMERGENCY

1. CUT THE POWER SUPPLY BEFORE FIRE FIGHTING.
2. USE AN EXTINGUISHER THAT IS EFFECTIVE WITH THE FLAMMABLE MATERIALS.
- 3 - IF UNABLE TO CUT THE POWER, OR YOU ARE NOT CERTAIN, USE AN EXTINGUISHING AGENT THAT IS NOT ELECTRICAL CONDUCTIVE OR THAT DOES NOT DAMAGE THE EQUIPMENT SUCH AS HALOGEN FUMES, DRY CHEMICAL POWDERS AND CARBON DIOXIDE.





(3) CHEMICAL HAZARDS

CHEMICALS

ACCORDING TO THE US OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), HAZARDOUS CHEMICALS ARE DEFINED AS ANY CHEMICAL THAT CAN CAUSE ONE OR MORE HAZARDS, BASED ON THE FOLLOWING FACTORS:

- 1- TYPE OF CHEMICALS
- 2- CONCENTRATION OF CHEMICALS
3. THE EXPOSURE SITE
4. EXPOSURE PATHWAYS. EXPOSURE TO CHEMICALS CAN BE AS FOLLOWS:
A INHALATION. B. SKIN CONTACT C INGESTION

HOW TO COPE WITH CHEMICAL HAZARDS

- 1- **FOLLOW SAFETY RULES WHEN STORING THE CHEMICALS**
 - A) DO NOT STORE CHEMICALS WITH REACTIVE SUBSTANCES.
 - (B) AVOID USING CONTAINERS OF HIGH-RISK CHEMICALS FOR OTHER PURPOSES.
 - (C) CONTAINERS OF CHEMICALS MUST BE MADE FROM UNBREAKABLE OR NON-REACTIVE SUBSTANCES.
2. **FOLLOW SAFETY RULES WHEN USING**
 - A. READ THE INSTRUCTIONS ON LABELS CAREFULLY
 - B- WEAR PROTECTIVE CLOTHING.
 - C. MAKE SURE THE CONTAINER IS NOT DAMAGED AND IS USED CORRECTLY.
3. **Follow the rules of chemical hazards control**
 - A. CONTAINMENT B VENTILATION C SUBSTITUTION





SAFETY RULES IN CHEMISTRY LABORATORIES

THERE MUST BE SIGNS AND NOTICES

1

THERE MUST BE SAFETY DEVICES.

2

THE FACILITY IS FREE OF HAZARDOUS SUBSTANCES.

3

A FIRST-AID BOX IS PROVIDED.

4

A FUNCTIONING FIRE ALARM

5

ENOUGH FUNCTIONING FIRE EXTINGUISHERS

6

DO NOT STACK HEAVY ITEMS ON HIGH PLACES

7

UNDAMAGED GAS VALVES AND PIPES.

8

CONTAINERS ARE TIGHTLY CLOSED AND PROPERLY TAGGED.

9

ALL MATERIALS MUST BE PROPERLY AND SAFELY STORED.

10

KEEP FLAMMABLE AND HAZARDOUS MATERIALS IN FIRE-RESISTANT AREAS.

11

PERSONAL SAFETY DEVICES.

12

EMERGENCY EXITS SIGNS.

14

EMERGENCY EXITS MUST BE OPEN AND CLEAR FROM OBSTRUCTION

13

SAFE ELECTRICAL WIRING.

15

A BACKUP POWER SUPPLY IN CASE OF EMERGENCY.

16

SAFE STORAGE OF GAS SOURCES USED IN LABORATORIES.

17



(4) NATURAL HAZARDS

NATURAL HAZARDS

NATURAL HAZARDS THREAT HUMAN LIFE BECAUSE OF THE DAMAGE THEY CAUSE TO LIVES AND PROPERTY. THE MOST COMMON REASONS INCLUDE STORMS, THUNDERBOLTS, AND LANDSLIDES.

HOW TO COPE WITH NATURAL HAZARDS

1. PREPAREDNESS AND MAKING NECESSARY ARRANGEMENTS FOR NATURAL HAZARDS.
2. FOLLOW THE INSTRUCTIONS OF THE CIVIL DEFENSE. AVOID RISKY ROADS AND PLACES, TAKE THE SAFE ROADS RECOMMENDED BY THE CONCERNED AUTHORITIES.
3. BE CAUTIOUS WHEN PASSING THROUGH ANY LOCATION NEXT TO NATURAL HAZARDS AS MUCH AS POSSIBLE.
4. REMAIN CALM WHEN EXPERIENCING ANY NATURAL HAZARD AND KEEP A SAFE DISTANCE FROM THE LOCATION LEST ERUPTION, AND DO NOT TRY TO APPROACH THE SITE.
5. WHEN NOTICING IMPOUNDED PERSONS BECAUSE OF A NATURAL HAZARD, SEEK HELP FROM THE CIVIL DEFENSE, AND TRY TO HELP WITH ANY METHOD, WITHOUT PUTTING YOURSELF INTO DANGER.



(5) PHYSICAL HAZARDS

PHYSICAL HAZARDS

PHYSICAL HAZARDS ARE DEFINED AS THOSE HAZARDS THAT CAN BE CONTROLLED THROUGH VARIOUS PREVENTIVE MEASURES. BEING IDENTIFIABLE, SPECIFIC, MEASURABLE, DETECTABLE, THEREFORE THEY COULD BE CONTROLLED.

PHYSICAL HAZARDS COULD HAPPEN IN THE WORKPLACE AND COULD NEGATIVELY AFFECT THE HEALTH AND LIFE OF WORKERS IF THEY EXCEED THE BOUNDS, INCLUDING:

1. EXTREME HEAT

IT MEANS HIGH TEMPERATURE AROUND THE HUMAN BEING.

2. EXTREME COLD

THE SENSATION OF COLD OR THE SO-CALLED COLD STRESS OCCURS WHEN AMBIENT AIR TEMPERATURES DROP WITH COLD CHILLS AND ARE CONSIDERED A PHYSICAL HAZARD.

3- NOISE

IT IS THE UNDESIRED SOUND THAT WE CONSTANTLY HEAR.

4- ILLUMINATION

MAKE SURE THAT ILLUMINATION DOES NOT FLUCTUATE IN ADJACENT PLACES.



HOW TO HANDLE PHYSICAL HAZARDS

A. HEAT

- ASSESSMENT AND REGULAR MEASUREMENT OF TEMPERATURE AT THE WORKPLACE.
- DESIGNATE AREAS OF CONVENIENT ATMOSPHERE TO WORKERS FOR THE LEISURE TIME.

B. Coldness

- IN CASE OF MANUAL WORK GLOVES MUST BE WORN.
- DESIGNATE WARM PLACES NEAR EMPLOYEES.

C. Noise

- ENGINEERING-BASED PREVENTION: PREVENTION OF THE SOURCE OF NOISE, REPLACEMENT, SUBSTITUTION, AND INSULATION.

D. Illumination

- MAKE SURE THAT ILLUMINATION DOES NOT FLUCTUATE IN ADJACENT PLACES.



(6) PROCEDURES FOR HANDLING HAZARDS AT OFFICES

MAKE SURE THAT THE ILLUMINATION IS CONVENIENT TO THE NATURE OF YOUR WORK.

1

DIVERT THE LIGHT SO THAT IT DOES NOT FALL DIRECTLY ON YOUR EYES.

2

DECREASE THE SCREEN LIGHT OF YOUR COMPUTER AND TRY TO LOOK AT SOMETHING ELSE FROM TIME TO TIME TO REDUCE EYE STRAIN.

3

MAKE SURE TO SIT COMFORTABLY AND THE CHAIR HAS A FIRM BASE FOR OPTIMAL STABILITY.

4

TAKE A FEW BREAKS; LEAVE YOUR CHAIR AND MOVE FOR A WHILE.

5

MAKE SURE THAT THERE ARE SAFETY REQUIREMENTS IN YOUR WORKPLACE REPRESENTED IN THE SAFETY OF FLOORING, ELECTRICAL WIRING, EMERGENCY EXITS AND ALARMS. DON'T FORGET THE RULES OF PUBLIC SAFETY IN CASE OF EMERGENCY.

6

DO NOT USE ELECTRIC STOVES TO MAKE HOT DRINKS IN YOUR OFFICE TO AVOID FIRE HAZARDS.

7

MAKE SURE THAT ALL ELECTRICAL CONNECTIONS IN YOUR OFFICE ARE UNDAMAGED AND AVOID POWER OVERLOAD THAT CAUSES FIRE.

8





(7) PROCEDURES FOR HANDLING HAZARDS IN PUBLIC PLACES

THERE MUST BE SIGNS TO ELEVATORS AND EMERGENCY EXITS.

1

THE SITE IS FREE OF SUBSTANCES THAT ARE HAZARDOUS TO PUBLIC SAFETY.

2

THE FIRE ALARM SYSTEM FUNCTIONS WORKS.

3

REVIEW THE SAFETY MEANS CONTINUOUSLY AND MAKE SURE OF THEIR READINESS.

4

A FIRST-AID BOX IS PROVIDED.

5

ENOUGH FUNCTIONING FIRE EXTINGUISHERS

6

UNDAMAGED GAS VALVES AND PIPES AT RESTAURANTS.

7

EMERGENCY EXITS MUST BE OPEN AND CLEAR FROM OBSTRUCTION

8

COLLABORATE FOR THE IMPLEMENTATION OF MOCK EVACUATION PLANS.

9





PROCEDURES FOR HANDLING FIRES AND SAFETY ACCIDENTS

CONTROL THE FIRE WITH THE AVAILABLE
EXTINGUISHERS UNTIL THE ARRIVAL OF THE
CIVIL DEFENSE TEAM.

1

FACILITATE THE TASK OF CIVIL DEFENSE.

2

CALL AN AMBULANCE IN CASE OF
INJURIES.

3

RAPID EVACUATION OF THE BUILDING.

4

ASSIST IN PREVENTING GATHERINGS.

5

HELP PREVENT ENTRY TO THE BUILDING AFTER
EVACUATION.

6





**EVACUATION INSTRUCTIONS
IN PUBLIC BUILDINGS**

THE EVACUATION PLAN AIMS TO RESPOND TO EMERGENCIES IN CAMPUS AS FOLLOWS:

EVACUATE EVERYONE IN THE BUILDING AS SOON AS THE FIRE ALARM SOUNDS BY HEADING TO THE DESIGNATED ASSEMBLY POINTS



FORMATION AND TRAINING OF AN EMERGENCY TEAM IN COLLABORATION WITH THE CIVIL DEFENSE



CALL THE AMBULANCE AND CIVIL DEFENSE



FIRST AID



CLOSE ALL DOORS AND WINDOWS EXCEPT FOR THE EXITS DESIGNATED FOR EVACUATION (WHICH MUST BE CLEAR FOR EXITING DURING THE OFFICIAL WORKING TIME).



WHAT SHOULD BE AVAILABLE:

THE AVAILABILITY OF NECESSARY MEANS AND DEVICES TO RESPOND TO EMERGENCY PLAYS A MAJOR ROLE IN THE REDUCTION OF LOSSES. THEY ARE AS FOLLOWS:

EMERGENCY ASSEMBLY POINTS



INITIAL FIRE FIGHTING DEVICES FOR ALL TYPES OF FIRES THAT MUST BE FUNCTIONING FOR IMMEDIATE USE



MEDICATIONS FOR FIRST AID



ENOUGH EMERGENCY EXITS AND SIGNS THAT FACILITATE EVACUATIONS



TYPES OF FIRE EXTINGUISHERS



ALS

WATER

WATER EXTINGUISHERS ARE USED FOR SOLID



POWDER

FOR MOST TYPES OF FIRES,
EXCEPT FOR METAL FIRE



CARBON DIOXIDE

FOR EXTINGUISHING ELECTRICAL FIRES;
IT IS PREFERABLE TO USE IT OUTDOORS



FOAM

FOR EXTINGUISHING FIRES OF
FLAMMABLE LIQUIDS
(PETROL, OIL....)



FIRE BLANKET

FOR EXTINGUISHING
FIRES OF NORMAL LIQUIDS SUCH AS:
(COOKING OIL, CAR OIL



PUBLIC SAFETY DEVICES



1) All types of fire extinguishers



2) Smoke detectors



3) Heat detectors





4) Sound alarm in all parts of the building



5) Automatic extinguishing system



6) Water hoses



7) Manual alarm system

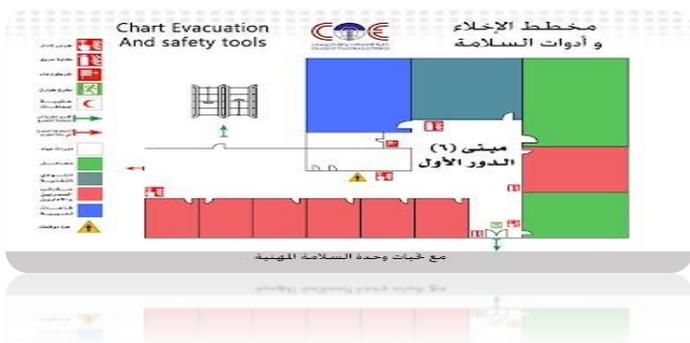




8) Assembly point signs



9) EMERGENCY EXIT
SIGNS



10) Emergency Guidelines





FOR EMERGENCY CALL:

WE ARE ALSO
PLEASURE TO
RECEIVE YOUR
INQUIRIES AND
SUGGESTIONS ON
TAWASUL



UNIVERSITY
OPERATIONS UNIT
0112590222



KING ABDALLAH
CAMPUS FOR LADIES
0112590333



MEDICAL CENTER
0112590991



CIVIL DEFENSE
998



SAUDI RED CRESCENT
997



SECURITY PATROLS
911

