

## **HKUST Emergency Procedures**

Please read through these emergency procedures immediately and keep this brochure handy for future reference. **DON'T WAIT UNTIL THERE IS AN EMERGENCY.**

### **Priority**

Adhere to the following priorities when encountering an emergency:

- 1. Personal Safety - Yours and Others**
- 2. Protect University Property**
- 3. Preserve Academic Programs**

### **Important Phone Numbers**

Reporting ALL Campus Emergency, Security Control Centre    8999 or 6565

Enquiry of security matters    6565

Enquiry of safety matters    6512

When calling for help, always give:

- Location of the accident
- The nature and severity of the accident, e.g. how many persons are injured, how serious is the injury, extent of property damage, any gas leakage etc.
- Your name and location

## CONTENTS

EMERGENCY PREPAREDNESS.....	1
IT IS EVERYONE'S RESPONSIBILITY .....	1
BE PREPARED FOR FIRE .....	1
BE PREPARED FOR INJURY .....	2
BE PREPARED FOR LABORATORY EMERGENCY.....	2
GENERAL EMERGENCY PROCEDURES.....	3
FIRE .....	3
INJURY AND ILLNESS.....	5
LIFT ENTRAPMENT.....	6
LABORATORY EMERGENCY PROCEDURES.....	7
HAZARDOUS MATERIAL SPILL .....	7
HAZARDOUS MATERIAL SPILL RESPONSE PRINCIPLES.....	7
HAZARDOUS CHEMICAL SPILL IN RESEARCH LABORATORY.....	8
HAZARDOUS CHEMICAL SPILL IN A TEACHING LABORATORY.....	9
HAZARDOUS CHEMICAL SPILL IN A DANGEROUS GOODS STORE...	10
HAZARDOUS CHEMICAL SPILL DURING DELIVERY.....	11
RADIOACTIVE MATERIAL SPILL.....	12
BIOHAZARDOUS MATERIAL SPILL.....	13

## **EMERGENCY PREPAREDNESS**

PREVENTION is the key to avoid accidents. Prevention is also the essence of safety training. However, accidents can still happen. Major accidents may lead to emergencies which threaten human lives and university property. The idea of EMERGENCY PREPAREDNESS is to help everyone to prepare for such situations so as to minimize personal injury and property damage.

### **IT IS EVERYONE'S RESPONSIBILITY**

Supervisors are responsible for establishing safe procedures and providing protective equipment, on-the-job safety training and information needed in hazardous works. They must instruct their staff and students about the hazards, the safety precautions, and the actions to take in case of an accident, which may include general procedures as published below and specific ones tailored for special work places or operations. Drills should also be periodically organized by supervisors to keep concerned students and employees familiar with the proper execution of emergency procedures.

Employees and students are required to learn and understand the hazards they work with and to follow all necessary precautions. He/she should also report any unsafe or hazardous condition in the area to the supervisor and/or HSEO. In case of an accident, the employee or student should act to protect him/herself and others in the area.

### **BE PREPARED FOR FIRE**

- Do not tamper with any fire detection or fire fighting devices.
- Do not block fire escape routes.
- Keep all fire doors closed.
- Know the escape routes in your environment.
- Know the locations of breakglass fire alarm buttons and fire fighting equipment, and make sure they are easily accessible.
- Know the designated assembly points.
- Learn to use fire fighting equipment.
- For laboratory or special work areas, develop emergency shut down procedures for processes which may create hazards when unattended.

For more information on Fire Safety, see Chapter 6 of the HKUST Safety and Environmental Protection Manual.

## BE PREPARED FOR INJURY

- Learn first-aid.
- Make sure first-aid kits, including specific antidotes if applicable, are well stocked at all times.
- Learn how to use the antidotes if hydrofluoric acid or cyanide is used.
- Laboratory users should know the location of emergency shower and eyewash, and make sure they are easily accessible.

## BE PREPARED FOR LABORATORY EMERGENCY

- **Know the chemicals you use** by referring to Material Safety Data Sheets (MSDSs) which provide information on the physical, chemical, and toxicological properties of a chemical and procedures for handling, spills, fire, and disposal. MSDSs are available from the Center of Laboratory Supplies (CLS) and the Library. If MSDSs are not available or if the manufacturer's MSDS lacks information needed for safe use of the material, request assistance from HSEO.
- **Plan your operation or experiment** carefully, taking into consideration the hazardous properties of materials involved. Also think about what to do if something goes wrong in the process. Stock appropriate spill control materials, personal protection equipment, first aid materials, and antidotes.
- **Get proper training.** The procedures below make reference to "significant amounts of hazardous materials", and performing certain actions "if it is safe to do so" or not doing something "if it is unsafe to do so." These are judgement calls. A large quantity of low toxicity material may be safe to handle, while a small amount of highly toxic substance may be significantly hazardous. In order to make the correct "call", you must have prior knowledge concerning the potential hazards of the materials, operations and proper control measures; have participated in hands-on safety training and emergency drills; and be confident enough in that knowledge and training to make the judgement call.
- **Know the locations** of the Emergency Ventilation button affecting your laboratory, the fire alarm button, fire fighting equipment, spill control materials, personal protective equipment, and first aid kit.
- **BE CONSERVATIVE** if you have doubts or reservations about whether or not "it is safe/unsafe to do so". Always take the conservative approach (e.g. sound the alarm, exit the lab and leave clean-up or other response action to the emergency response team).

## GENERAL EMERGENCY PROCEDURES

### FIRE

These fire emergency procedures are for the Academic Building. **For student dormitory residents, refer to Hall Resident Handbook for fire emergency procedures.**

**When you hear the fire alarm,**

- **Remain calm and check** if there is any sign of fire in the vicinity.
- **If you see fire or smoke**, or hear the announcement asking you to **evacuate**, follow the evacuation procedures.
- **If there is no sign of a fire, stay alert** and pay attention to announcement until the fire alarm is silenced.
- **Evacuate if the alarm has sounded for more than two minutes.**
- **If you hear the buzzer sound** which indicates the fire alarm is activated in an adjacent fire zone, **stay alert** and pay attention to announcement.
- **If you hear both** the buzzer and the fire alarm, then you are near the boundary of a fire zone, and must **treat it as if you hear the fire alarm.**

**If you discover a fire,**

- **Activate the fire alarm** by pressing the breakglass fire alarm button.
- **Report to Security Control Centre** by dialling 8999.
- **Alert other people.**
- **If SAFE to do so, try to put out the fire** using fire fighting equipment.
- **DO NOT take any personal risk. If the fire gets beyond your control, evacuate immediately** by following the evacuation procedures.
- **Close the door** of the room on fire.

## Fire Fighting Equipment

- i) Water from the hose reels is good for wood, paper or, structural fires, but NOT for oil, electrical or metal fires.
- ii) The most common fire extinguishers on campus are the carbon dioxide type (black container) which are good for general purposes, including oil and/or electrical fires.
- iii) Some laboratories have dry powder fire extinguishers (blue container), which are good for chemical and/or metal fires.
- iv) Sand (lab buckets) can be used to contain flammable liquid as well as put out a fire, including metal fires.
- v) Fire blankets can be used when someone's clothing catches fire.

## Evacuation Procedures

### When there is a fire,

- **Remain calm.** Walk, do not run, especially when travelling on staircases.
- **Immediately leave** the building and go to the designated assembly point using the nearest exit.
- **Try to help those who may have difficulties travelling** such as disabled and pregnant persons.
- **DO NOT USE THE LIFTS.**
- **Report to your Departmental Safety Officer** at the designated assembly point as far as practicable.
- **Do not return to the building** until permission is given by the Fire Services Department Officer in charge at the scene.

### If your clothing is on fire,

- **DO NOT RUN.**
- **Drop to the floor and roll** your body to extinguish the fire.
- If a fire blanket is available, wrap around your body to smother the fire.

## INJURY AND ILLNESS

### When someone is injured or ill,

- **Call Security Control Centre (SCC)** by dialling 8999.
- **Call for Community Emergency Service** directly by dialling (9)999 **if the situation is urgent or serious** and inform SCC subsequently.
- **DO NOT conduct a rescue operation unless you know for sure how to** perform it properly and know the situation is safe. A poorly executed rescue operation may endanger the rescuers when, for example, the victim is inside a room filled with toxic gas, or is still in contact with live electricity.
- **DO NOT move an injured person**, especially when there are signs of spinal injury or bone fracture, unless it is absolutely necessary to do so for safety reasons.
- **Keep the injured or ill person comfortable, warm, and lying down.**
- **Give first-aid treatment** if necessary.
  - i) Acid and alkali burns--flush with running water; use emergency shower if necessary. Do not attempt to neutralize.
  - ii) Heat or cold burns--flush with cold water.
  - iii) Chemical in eyes--flush eyes with emergency eyewash.
  - iv) Major bleeding--apply direct pressure to the wound using a clean cloth. Avoid contamination by blood and bodily fluid of the injured.
  - iv) Toxic gas inhalation--expose to fresh air.
  - v) Hydrofluoric acid exposure--flush with water and apply antidote immediately.
  - vii) Cyanide exposure--use antidote immediately.

## **LIFT ENTRAPMENT**

Remember not to use the lift when there is a fire.

**If you are trapped in a lift,**

- **Remain calm.**
- **Press the alarm button** in the lift.
- **Communicate** through the intercom unit which connects directly to Security Control Centre.
- **Never try** to force open the lift door or get out through the access hole at the ceiling of the lift car. Such attempts may result in fatal accidents or serious injuries.
- **Be patient** and wait for help.



## **LABORATORY EMERGENCY PROCEDURES**

### **HAZARDOUS MATERIAL SPILLS**

The following emergency procedures are intended to provide general guidelines for **spills which involve significant amounts of hazardous materials**. These are **general** procedures. Supervisors should provide employees and students with further **lab-specific instructions**.

### **HAZARDOUS MATERIALS SPILL RESPONSE PRINCIPLES**

- GET AWAY
- ALERT OTHERS
- GET HELP
- SEAL OFF THE AREA

## HAZARDOUS CHEMICAL SPILL IN A RESEARCH LABORATORY

- **Alert co-workers.**
- **If safe to do so,**
  - i) **confine** the spill with appropriate materials,
  - ii) **turn off** from a remote location all heat/ignition sources if flammable vapour is involved.

Ask for assistance if needed.

- **Press the Emergency Ventilation button (do not activate this button in case of fire).**
- **Inform the Security Control Centre** by dialling **8999** from a safe location.
- **Evacuate everyone** in the affected area. Leave contaminated clothing or articles behind and close the door.
- **Erect chemical spill warning sign outside the entrance** to prevent others from entering the room.
- If possible, post yourself at a safe distance from the laboratory while keeping the entrance or access routes in sight and help to prevent entry to the laboratory.
- If conditions allow, **stay to assist** the emergency response team.

## Decontamination Procedures

Persons contaminated by hazardous chemicals should go through decontamination as soon as they arrive at a safe location.

- **Treat any injury first.** First-aiders should protect themselves against contamination with hazardous chemicals and blood or bodily fluids from injured person.
- **Remove any other suspected contaminated clothing or articles,** seal in a plastic bag and label if possible.
- **Wash contaminated skin area with water and detergent.** Avoid aerosol generation (e.g. scrubbing with brush).
- If eyes have been contaminated, **flush with water.**
- **Immediately seek medical attention.**

## HAZARDOUS CHEMICAL SPILL IN A TEACHING LABORATORY

Students or technicians upon discovering a chemical spill:

- **Alert all persons in the vicinity.**
- **Inform the person in-charge** in the laboratory.

Upon notification of a chemical spill, person-in-charge should:

- **If safe to do so,**
  - i) **confine** the spill with appropriate materials,
  - ii) **instruct the students to turn off** from a remote location all heat/ignition sources if flammable vapour is involved.
- **Press the Emergency Ventilation button (do not activate this button in case of fire).**
- **Evacuate everyone** in the laboratory. Leave contaminated clothing or articles behind and close the door(s).
- **Inform the Security Control Centre** by dialling **8999** from a safe location.
- **Erect chemical spill warning sign outside the entrance** to prevent others from entering the area.
- If possible, post yourself at a safe distance from the laboratory while keeping the entrance or access routes in sight and help to prevent entry to the laboratory.
- If conditions allow, **stay to assist** the emergency response team.

## Decontamination Procedures

Persons contaminated by hazardous chemicals should go through decontamination as soon as they arrive at a safe location.

- **Treat any injury first.** First-aiders should protect themselves against contamination with hazardous chemicals and blood or bodily fluids from injured person.
- **Remove any other suspected contaminated clothing or articles,** seal in a plastic bag and label if possible.
- **Wash contaminated skin area with water and detergent.** Avoid aerosol generation (e.g. scrubbing with brush).
- If eyes have been contaminated, **flush with water.**
- **Immediately seek medical attention.**

## HAZARDOUS CHEMICAL SPILL IN A DANGEROUS GOODS STORE

- **Alert co-workers.**
- **If safe to do so,**
  - i) **confine** the spill with appropriate materials,
  - ii) **contain the spill inside the DG store.**

Ask for assistance if needed.

- **Evacuate everyone** in the affected area. Leave contaminated clothing or articles behind and close the door.
- **Inform the Security Control Centre** by dialling **8999** or other means. At least one staff should remain at the scene.
- **Erect chemical spill warning sign outside the entrance** to prevent others from entering the room.
- If possible, post yourself at a safe distance from the store while keeping the entrance or access routes in sight and help to prevent entry to the store.
- **Assist** the emergency response team upon its arrival.

## Decontamination Procedures

Persons contaminated by hazardous chemicals should go through decontamination as soon as they arrive at a safe location.

- **Treat any injury first.** First-aiders should protect themselves against contamination with hazardous chemicals and blood or bodily fluids from injured person.
- **Remove any other suspected contaminated clothing or articles,** seal in a plastic bag and label if possible.
- **Wash contaminated skin area with water and detergent.** Avoid aerosol generation (e.g. scrubbing with brush).
- If eyes have been contaminated, **flush with water.**
- **Immediately seek medical attention.**

## HAZARDOUS CHEMICAL SPILL DURING DELIVERY

- **Alert people in the vicinity.**
- **Confine the spill if safe to do so.**
- **Inform the Security Control Centre** by dialling **8999** or by other means. At least one staff should remain at the scene.
- **Erect chemical spill warning sign on access route.**
- If possible, post yourself at a safe distance from spill while keeping the spill in sight and help to prevent access by unauthorized personnel.
- **Assist** the emergency response team upon its arrival.

## Decontamination Procedures

Persons contaminated by hazardous chemicals should go through decontamination as soon as they arrive at a safe location.

- **Treat any injury first.** First-aiders should protect themselves against contamination with hazardous chemicals and blood or bodily fluids from injured person.
- **Remove any other suspected contaminated clothing or articles,** seal in a plastic bag and label if possible.
- **Wash contaminated skin area with water and detergent.** Avoid aerosol generation (e.g. scrubbing with brush).
- If eyes have been contaminated, **flush with water.**
- **Immediately seek medical attention.**

## RADIOACTIVE MATERIAL SPILL

- **Alert co-workers.**
- **If safe to do so, confine the spill** with appropriate materials.
- **DO NOT activate Emergency Ventilation** UNLESS radioactive gas or vapour (e.g. Iodine-125) is involved.
- **Inform the Security Control Centre** by dialling **8999**.
- **Evacuate everyone** in the room. Leave contaminated clothing or articles behind and close the door.
- **Erect warning sign outside the entrance** to prevent others from entering the room.
- If possible, post yourself at a safe distance from the laboratory while keeping the entrance or access routes in sight and help to prevent entry to the laboratory.
- If conditions allow, **stay to assist** the emergency response team.

## Decontamination Procedures

Persons contaminated by radioactive material should go through decontamination as soon as they arrive at a safe location.

- **Treat any injury first.** First-aiders should protect themselves against contamination with radioactive material and blood or bodily fluids from injured person.
- **Remove any other suspected contaminated clothing or articles**, seal in a plastic bag and label if possible.
- **Wash contaminated skin area with water and detergent.** Avoid aerosol generation (e.g. scrubbing with brush).
- If eyes have been contaminated, **flush with water**.
- **Immediately seek medical attention.**

## BIOHAZARDOUS MATERIAL SPILL

- **Alert co-workers.**
- **If safe to do so, contain the spill** with appropriate material.
- If the spill occurs in a biosafety cabinet, leave the unit on.
- **Evacuate everyone** in the affected area. Leave contaminated clothing or articles behind and close the door.
- **Inform the Security Control Centre** by dialling **8999** from a safe location.
- **Erect warning sign outside the entrance** to prevent others from entering the room.
- If possible, post yourself at a safe distance from the laboratory while keeping the entrance or access routes in sight and help to prevent entry to the laboratory.
- If conditions allow, **stay to assist** the emergency response team.

## Decontamination Procedures

Any person contaminated by the biohazardous material should go through decontamination as soon as they arrive at a safe location.

- **Treat any injury first.** First-aiders should protect themselves against contamination with biohazardous material and blood or bodily fluids from injured person.
- **Remove any other suspected contaminated clothing or articles**, seal in a plastic bag and label if possible.
- **Wash contaminated skin area** with water, appropriate disinfectant and soap.
- If eyes have been contaminated, **flush with water.**
- **Immediately seek medical attention.**