



**TAIWAN
TECH** National Taiwan University of
Science and Technology

新進人員安全衛生教育訓練

Safety and Health Training Course for New Employees

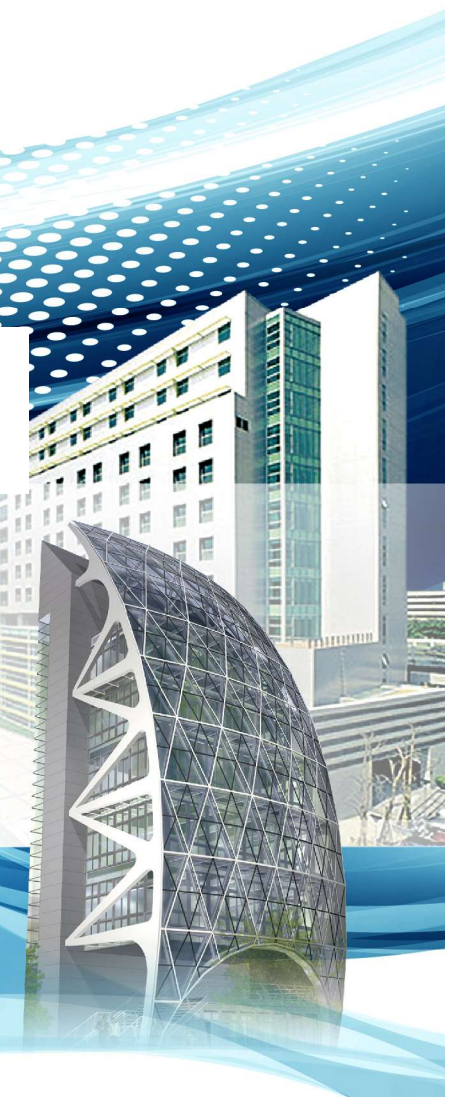
主講者：**單位主管(或計畫主持人)(或單位資深同仁)**

主辦單位：環安室

協辦單位：**單位名稱**

日期：6/8/2022

時間：4:13 PM





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課程大綱

- 1) 遵守本校安全衛生工作守則
- 2) 機械設備使用前要自主檢查
- 3) 遵守實驗室標準作業程序
- 4) 本校緊急事故應變方式
- 5) 消防及急救常識
- 6) 其他與勞工作業有關之安全衛生知識

備註:依據職業安全衛生教育訓練規則:新僱勞工或在職勞工於變更工作前,應使其接受適於各該工作必要之一般安全衛生教育訓練,其上課內容應有以上七項。

了解本校工作守則規定

職業安全衛生概念及安全衛生工作守則



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安全衛生工作守則



NTUST's Laboratory Safety and Hygiene Code of Simple Version Common Specification

(If there are other regulations, please follow the
relevant regulations of the department)



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The Precautions of General Safety and Health

一、使用實驗室時應填寫場地使用紀錄表。

When using the laboratory, fill the field use record form.

二、實驗室內禁止嬉鬧、進食及從事與實驗無關的活動。

It is forbidden to play, eat and engage in activities unrelated to the experiment in the laboratory.

三、實驗室應保持清潔，並定期進行環境清掃工作；地面應無油污、水或其他易導致滑倒之物質；如有特殊垃圾請分類，不可與一般垃圾混裝並需加蓋。

The laboratory should be kept clean and regularly cleaned; the floor should be free of oil, water or other substances that may cause slipping; if there is special garbage, please sort it, do not mix it with general garbage and need to cover it.

四、進行實驗時，請依照實驗室規定，是否應穿著實驗相關防護衣物及防護裝備，禁穿拖鞋、涼鞋或赤膊、赤腳工作，蓄長髮者應將頭髮紮好。

When conducting experiments, please follow the laboratory regulations, must wear experimental protective clothing and protective equipment. Slippers, sandals or bare-chested, barefoot work are prohibited. Long hair should be tied.



The Precautions of General Safety and Health

五、若實驗時有濺出或噴出之可能，宜配戴安全眼鏡；處理粉末試藥，應配戴防粉塵口罩；操作危險性及毒性化學藥品時應戴手套；處理有機試劑，則應配戴防毒面罩，並選擇合宜的濾罐。

Remarks: If there is any possibility of spilling or spraying during the experiment, it is advisable to wear safety glasses; when handling powder test, wear anti-dust mask; wear gloves when handling dangerous and toxic chemicals; Wear a gas mask and choose a suitable canister.

六、物品堆放勿阻礙門窗之空氣流通，亦不可堆放於主要通路與出口處，影響逃生動線。

Stacking of items should not hinder the air circulation of doors and windows, nor should be stacked on the main aisle and exits, it may affect the escape of routes.

七、實驗室內嚴禁吸菸。

Smoking is strictly prohibited in the laboratory.

八、機械、儀器設備應放置整齊，訂定操作守則並張貼於明顯處。

Machinery and equipment should be placed neatly, and the operating rules should be set and posted in obvious places.



The Precautions of General Safety and Health

九、機械、儀器使用前，應詳讀操作手冊，並按正常程序操作，用畢後務必關上所有開關。

Before using the machine or instrument, read the operation manual carefully and operate it according to the normal procedure. Be sure to switch off after use.

十、實驗室有操作高溫、高壓或有輻射危險之實驗時，應使用安全遮板或安全防護罩。

Safety shutters or safety shields should be used when laboratories are operating high temperature, high pressure or radiation hazard.

十一、操作危險實驗時，應於門口懸掛警示牌，非工作人員不得任意進入。

When operating a dangerous experiment, a warning sign shall be hoisted at the door, and non-workers shall not enter at will.

十二、認清並牢記實驗室內最近的逃生出口、滅火器、急救箱及緊急沖淋設備與洗眼器的位置，並熟知使用方法。

Recognize and keep in mind the location of the nearest escape exit, fire extinguisher, first aid kit, emergency shower equipment and eye wash in the laboratory, and familiar with the method of use.



The Precautions of General Safety and Health

十三、不得以濕手或具導電性之濕操作棒操作電器設備。

Do not operate the electrical equipment with wet hands or conductive wet handles.

十四、實驗完畢應檢查水電、及相關可能引起災害之設備等是否關閉或停止運作，不必繼續開啟之儀器設備，應予以關閉以策安全，門窗及門禁與監視系統是否正常，避免外人入侵引發危險。

After the completion of the experiment, it should be checked whether the hydropower and related equipment that may cause disasters are shut down or stopped. The instruments and equipment that do not need to be turned on should be closed for safety, whether the doors and windows, the access control and monitoring system are normal, and the invasion of outsiders is avoided danger.

十五、發生實驗災害，請立刻通知校安中心協助處理，必要時，如遇火災等請直接撥打119並告知你所在的大樓和門牌位置，以利救災；各單位發生重大災害時，除必要之急救、搶救外，非經司法機關或檢查機構許可，不得移動或破壞現場。

If the disaster of experiments occurred, please notify the school safety center to assist urgently. If there is a fire, please directly dial 119(if it is in necessary) to inform the location of your building and door number for facilitate disaster relief; when disasters occur in all units, unless the necessary for aid and rescue, if not, the scene shall not be moved or destroyed without the permission of the judicial or inspection agency.

十六、本校教職員工生除需遵守本守則所訂各項規定外，對於各項研究計畫之實（試）驗，均需遵照其標準操作程序作業以確保安全。

The faculty, staff and students are required to abide by the regulations and they must follow their standard operating procedures to ensure safety for the experiments of various research projects.



Laboratory Chemical Related Experimental Considerations

一、實驗前詳細閱讀有關實驗內容相關資料(化學實驗需詳閱安全資料表)。

Read the relevant information about the experimental content before the experiment (the chemical safety data sheet should be read in detail).

二、化學藥品使用後需放回原處。冷藏化學藥品（樣品）之冰箱及冷藏櫃不得放置食品、飲料。

Chemicals need to be returned after use. Food and beverages must not be placed in refrigerators and refrigerators for chilled chemicals (samples).

三、操作揮發性有機溶劑、毒性、危險性、可燃性或具腐蝕性蒸氣之實驗時，應在抽氣櫃內進行。

When operating volatile organic solvents, toxicity, hazardous, flammability or corrosive vapors, the experiment must be carried out in a Chemical Fume Hoods.

四、抽氣櫃內應保持整潔，不可置放與實驗無關之物品。

The Chemical Fume Hood should be kept clean and tidy, and items not related to the experiment should not be placed.



Laboratory Chemical Related Experimental Considerations

五、配製酸鹼試劑，應將酸、鹼慢慢滴入水中，不可直接將水加於試劑內。

When preparing the acid-base reagent, the acid and alkali should be slowly dropped into the water. Do not directly add water to the reagent.

六、使用移液吸管時，禁用口吸。

When using a pipette, do not use mouth to suck.

七、烘箱、蒸餾器等加熱設備旁嚴禁放置易燃性及易爆性化學藥品。

It is strictly forbidden to place flammable and explosive chemicals next to heating equipment such as ovens and distillers.

八、使用列管毒性及關注性化學物質應詳實填寫運作紀錄。

When using regulated toxic chemicals must fill the operation volume.



Laboratory Chemical Related Experimental Considerations

九、嚴禁由實驗室中自行攜出任何化學藥品或製劑，若違反規定經查屬實將依法或校規究辦。

It is strictly forbidden to carry out any chemical or preparations from laboratory. If the violation is confirmed, it will be handled according to local law or school regulations.

十、廢液應分類回收存放，不得任意傾倒排放。

The waste liquid should be collected and stored separately, and should not be dumped at will.

十一、被腐蝕性化學藥品濺到時，應立即用水沖洗至少十五分鐘以上，並送醫治療。

When splashed with corrosive chemicals, rinse immediately with water for at least 15 minutes and send for medical treatment.

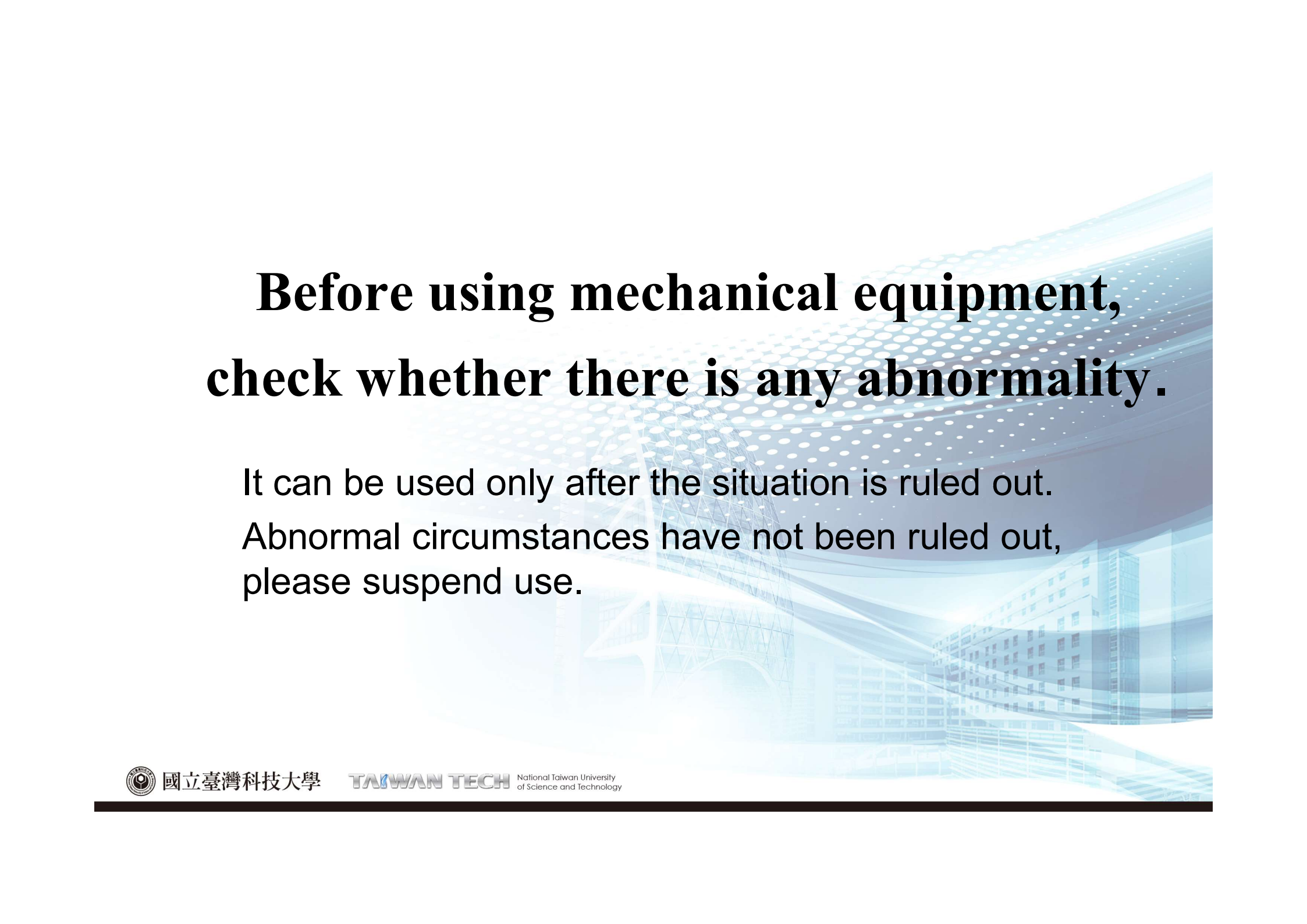
十二、不得使用未知或標示不明之工業用電器、材料、氣體或化學藥品。

Do not use industrial electrical appliances, materials, gases or chemicals that are unknown or unidentified.

十三、高壓氣體鋼瓶使用前應先確認減壓閥調整在“關”的位置，才可以打開原閥，調整欲使用之壓力。

Before using the high pressure gas cylinder, make sure that the pressure reducing valve is adjusted to the "off" position before opening the original valve and adjusting the pressure to be used.





**Before using mechanical equipment,
check whether there is any abnormality.**

It can be used only after the situation is ruled out.
Abnormal circumstances have not been ruled out,
please suspend use.



Follow standard operating procedures

When you conduct experimental research, you should follow the standard operating procedures for each experiment.



了解工作上的緊急處理方式

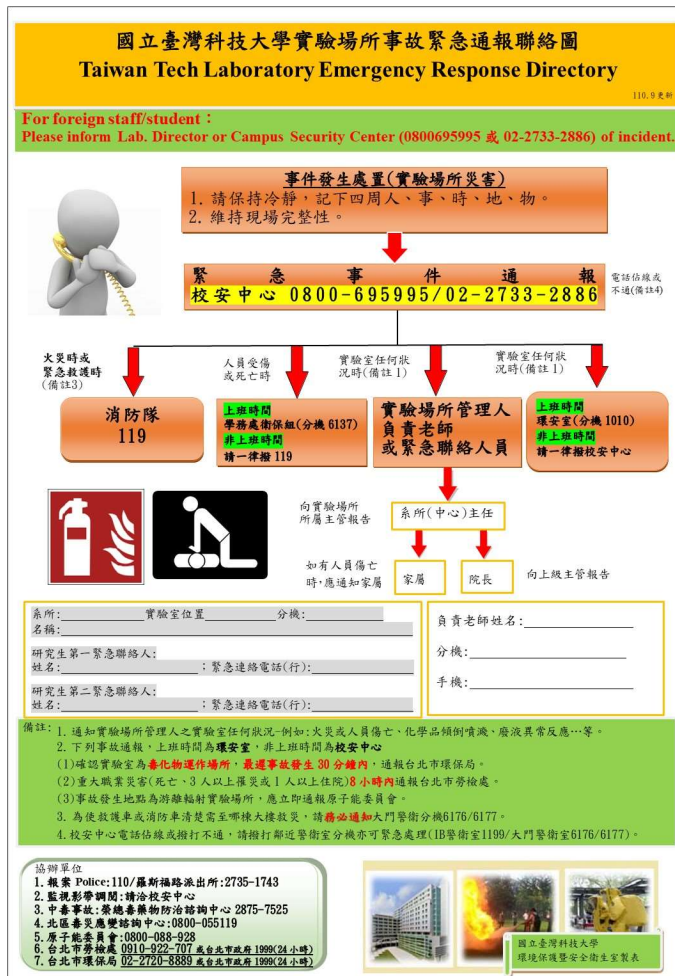
緊急事故應變處理



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Emergency Response Directory

Please inform Director or Campus Security Center (0800-695-995 或 02-2733-2886) of incident.

Amanda Yu製圖

Fire & Ambulance: call 119

為有效滅火，可於第一時間通知消防隊，或線上救護協助。



Fire



Ambulance

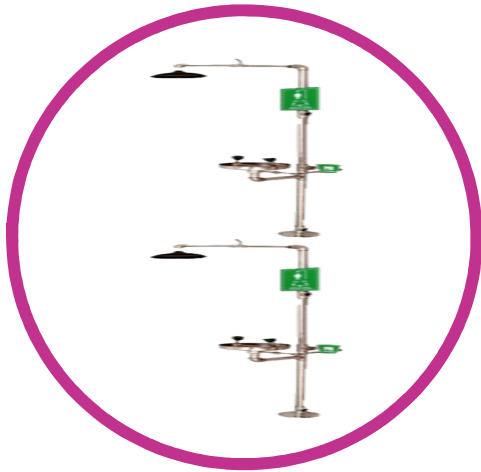


How to do CPR

Be sure to tell 119 which building and which room you are in.

Amanda Yu製圖

If you are injured, please go to the health center for treatment during work hours.



chemical spills
Shower for 15
minutes over



injured by machinery
Bandage to hospital

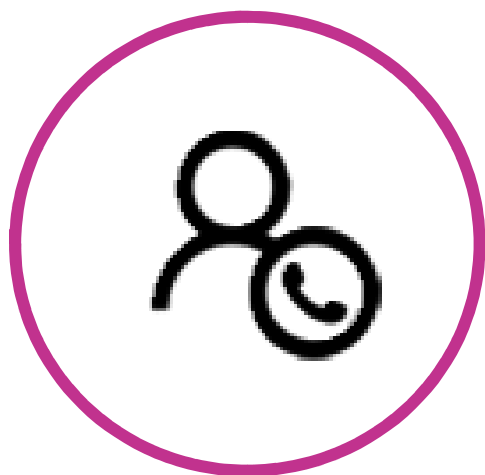


no breathing heartbeat
Find AEDs on campus

Amanda Yu製圖

Please inform Director

告知現場狀況、假日夜間火災時，並聯絡下列事宜



Call your
Director



Tell rescuers if
there are water-
prohibited substances



Provide laboratory
key to open the
door

Amanda Yu製圖

了解工作環境如何滅火與急救

消防及急救常識



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Use Fire Extinguisher



一般小型壁掛式滅火器可噴灑大約多久時間? 10秒



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心肺復甦術程序(叫叫CD)

CPR+AED operation process(Waking.Calling CD)

確認患者安全

To verify whether the victim is in conscious

叫
Waking

你還好嗎?
Are you alright?

1



打電話通報119・取出AED

Please call "119", take AED

叫
Calling

請問是119嗎?
Please call 119

2



確認患者無呼吸或沒有正常呼吸 進行心外按摩

To verify whether the victim is breathing.
Do external cardiac compression

C

每分鐘100-120次心臟按摩術
at least 100-120 per minute

3



聽從AED指示・進行急救

Follow AED vocal instruction, Use AED for first aid procedure

D

與患者保持距離!
keep the distance from the victim

4



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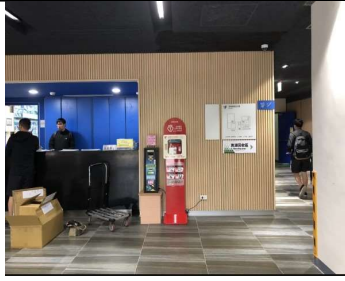
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Our Campus AED Map(10 locations)



國立台灣科技大學AED Location

體育館 GYM	管理學院 MA	大門口警衛室 Main Gate	衛生保健組 Health Center	第一學生宿舍 Dorm room (I)
				
第4教學大樓 TA	第三學生宿舍 Dorm room(III)	研揚大樓一樓穿堂 TR	學生活動中心三樓 Student Center	第二學生宿舍 Dorm room(II)
				

The other knowledge

About chemical safety



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CHEMICAL HANDLING GUIDE

1

IDENTIFY THE PRODUCT



It is important to have previous awareness of the product before using it, and to know if it is hazardous or not, please refer to the information guide and SDS.

2

CHECK THE LABEL



Read and understand all label information and interpret the pictograms.



3

WEAR PPE



Wear all required PPE (Personal protective equipment) as indicated on the SDS. It is important to use the right equipment prior to the use of chemical products.

4

DO NOT MIX



It is very dangerous to mix two or more chemical products in the same container; the reaction could be unpredictable.

5

DILUTE CORRECTLY



Observe the manufacturer instructions for dilution rates; never store chemicals or products in unmarked containers.

6

IN CASE OF ACCIDENT



Act immediately and report the issue to your supervisor. For spills, remove spills as indicated on the SDS.

7

NOT SMOKING



Do not smoke next to chemicals or flammable products.

8

VENTILATION



Make sure there is adequate ventilation when you are handling chemicals.

9

ANY DOUBTS, STOP!



If you have any doubts about handling the chemical or product, stop and ask your supervisor. A simple oversight can cause any unwanted accident.

10

WASH EXPOSED SKIN



Wash hands or exposed skin after handling chemicals or cleaning products.



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Lab Safety

	don't touch the animals
	wear safety goggles
	wear lab coat
	wear gloves when necessary
	don't eat at your workstation
	clean up your workspace



Anyone not following the rules will be denied access to the lab room

LOOK OUT FOR THESE NEW GHS PICTOGRAMS ON LABELS OF

HAZARDOUS CHEMICALS

When you see any of these symbols it's **VERY IMPORTANT** that you **READ** the label (or Safety Data Sheet) then follow the instructions.

The labelling of Hazardous Chemicals in Australia is being modified to align with a worldwide system for easily identifying chemical hazards, describing the nature of the hazard, and recommending measures to minimise or prevent harmful effects of exposure.

The level of hazard is identified with either the word **DANGER** or **WARNING**. **DANGER** relates to the highest level of hazard, which can seriously injure or even kill a person. **WARNING** is for chemical hazards that pose a lesser but still serious threat to health and safety.

Whenever you see a label with one or more of these symbols it is **VERY IMPORTANT** for the safety of yourself and others that you **READ** carefully the label (or Safety Data Sheet) then follow the instructions.



PHYSICAL HAZARDS					HEALTH HAZARDS			ENVIRONMENTAL HAZARD
								
EXPLOSIVE	FLAMMABLE	OXIDISING	GASES UNDER PRESSURE	CORROSIVE	ACUTE TOXICITY (HARMFUL)	ACUTE TOXICITY (SEVERE)	CHRONIC HEALTH HAZARD	ENVIRONMENTAL HAZARD

For further information about GHS (Globally Harmonized System of Classification and Labelling of Chemicals) visit Safe Work Australia or the WHS/QHS Regulator in your State/Territory.

www.promotesafety.com.au

本講義由台科大環安室製作
建請參考。

Q&A

請單位主管或計畫主持人參考使用，內容可自行增減，為貴單位的新進人員講解本校的相關規定，以至少1小時或3小時時間說明講義內容，完成後，簽署新進人員安全衛生承諾書文件(日期及講師簽名)，送環安室登記備查。



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