

## SDG 12.2.3 Waste Disposal Policy Including Disposal of Hazardous Substances

[SDG 12.2.3] Does your university as a body have a policy on waste disposal - Covering hazardous materials?

YunTech complies with the central government's regulations on **waste/hazardous material** management. We have also established waste management policies and hazardous material procurement management policies.

### Item 1. Toxic Waste Treatment

<https://en.yuntech-csr.tw/policy/>

YunTech handles toxic waste in accordance with regulations. Toxic waste generated by the university is considered commercial waste. It must be correctly categorized, stored, and disposed of in accordance with the "Criteria Governing Methods and Facilities for Storage, Clearance, and Disposal of Industrial Wastes" to prevent environmental pollution or any harmful effects on individuals within the campus.

As for the treatment of laboratory waste liquids on campus, the Ministry of Education has mandated that these liquids be classified and stored in accordance with the "Temporary Classification of Laboratory Waste Liquids." Subsequently, legitimate waste disposal agencies are commissioned to handle the treatment on behalf of the school. **This information is also included in YunTech's annual sustainability report, which is publicly issued.**

### 1. Policy of Toxic Chemical Substance Management

YunTech recently established the "National Yunlin University of Science and Technology Occupational Safety Management Program Guidelines" on April 28, 2020. This program entails the classification, labeling, management, and disposal of hazardous substances.

<https://ccx.yuntech.edu.tw/index.php/2020-02-26-09-23-2/2023-09-07-08-29-00>

## 管理辦法

- 國立雲林科技大學職業安全衛生委員會設置要點
- 國立雲林科技大學安全衛生工作守則
- 國立雲林科技大學安全衛生管理規章
- 國立雲林科技大學危害通識計畫書
- 國立雲林科技大學個人防護具使用管理辦法
- 國立雲林科技大學員工健康保護及管理要點 /附1/附2/附3/附4/
- 國立雲林科技大學異常工作負荷促發疾病預防計畫 /附1/附2/附3/附4/附5/附6/
- 國立雲林科技大學執行職務遭受不法侵害預防計畫
- 國立雲林科技大學人因性危害預防計畫
- 國立雲林科技大學母性健康保護計畫
- 國立雲林科技大學職業安全衛生管理計畫訂定規範
- 國立雲林科技大學職業安全衛生管理計畫
- 國立雲林科技大學自動檢查規範
- 國立雲林科技大學危害鑑別風險評估執行規範
- 國立雲林科技大學作業環境監測計畫
- 國立雲林科技大學採購管理之安全衛生規範
- 國立雲林科技大學變更管理之安全衛生規範 /附.word/附.odt/
- 國立雲林科技大學安全作業標準訂定規範
- 國立雲林科技大學安全衛生教育訓練規範
- 國立雲林科技大學職業災害事故調查及處理規範 /附1.word/附1.odt/附2.word/附2.odt/
- 國立雲林科技大學承攬作業事前告知工作環境與危害因素程序

YunTech Occupational Safety Management Program Guidelines

## 國立雲林科技大學職業安全衛生管理計畫訂定規範

109年4月28日109年第2次職業安全衛生委員會會議通過

- 一、目的：為落實校園安全衛生管理工作，防止教職員工生發生職業災害，依據職業安全衛生法第23條及職業安全衛生法施行細則第31條，訂定職業安全衛生管理計畫規範(以下簡稱本規範)。
- 二、範圍：本校第二類事業(如實驗室、試驗室、實習工場或試驗工場等工作場所)及第三類事業(如其他非屬第二類之校內場所)。
- 三、權責：
  - (一) 環境安全科技中心：擬訂、規劃、督導及推動本計畫及相關環保和安全衛生管理事項，並協助有關部門實施。
  - (二) 職業安全衛生委員會：對擬訂之安全衛生政策提出建議，並審議、協調、建議安全衛生相關事項。
  - (三) 環安衛人員：擬訂、規劃及推動職業安全衛生管理計畫及安全衛生法令規定之事項，並協助有關單位實施。依法令規定或視實際狀況修訂相關規章、計畫及工作守則及定期或不定期實施工作場所安全衛生檢查等。
  - (四) 適用場所之系、所中心主管：依職權指揮、監督所屬執行安全衛生管理事項，並協調及指導有關人員實施。
  - (五) 適用場所負責人：負責協助並落實職業安全衛生管理計畫及職安法令規定之事項，並遵守主管機關指定之建議與事項、法令之規定及環安中心所列之建議，確實落實安全衛生管理，若有不符規定之事項，應儘速改善。
- 四、計畫項目：
  - (一) 工作環境或作業危害之辨識、評估及控制。
  - (二) 機械、設備或器具之管理。
  - (三) 危害性化學品之分類、標示、通識及管理。
  - (四) 有害作業環境之採樣策略規劃及監測。
  - (五) 採購管理、承攬管理及變更管理。
  - (六) 安全衛生作業標準。
  - (七) 定期檢查、重點檢查、作業檢點及現場巡視。
  - (八) 安全衛生教育訓練。
  - (九) 個人防護具之管理。
  - (十) 健康檢查、管理及促進。
  - (十一) 安全衛生資訊之蒐集、分享及運用。

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### YunTech Occupational Safety Management Program Guidelines

Approved at the 2nd Occupational Health and Safety Committee Meeting on April 28, 2020

1. Purpose: To implement campus safety and health management, prevent occupational accidents among faculty, staff, and students, and in accordance with Article 23 of the Occupational Safety and Health Act and Article 31 of its Enforcement Rules, these regulations are formulated as the Occupational Health and Safety Management Plan Regulations (hereinafter referred to as "these regulations").

2. Scope: Category II (e.g., laboratories, testing rooms, practice workshops, or experimental workshops, etc.) and Category III (other on-campus locations not belonging to Category II) activities within the university.

3. Responsibilities:

(1) Environmental Safety and Health Center: Develop, plan, supervise, and promote this plan and related environmental protection and safety and health management matters, and assist relevant departments in implementation.

(2) Occupational Safety and Health Committee: Provide recommendations for the formulation of safety and health policies, review, coordinate, and propose safety and health-related matters.

(3) Environmental and Safety Personnel: Develop, plan, and promote the Occupational Health and Safety Management Plan and matters stipulated in safety and health laws and regulations, and assist relevant units in implementation. In accordance with legal provisions or as required by the actual situation, amend relevant regulations, plans, work guidelines, and conduct periodic or irregular workplace safety and health inspections.

(4) Heads of Departments or Centers in Applicable Locations: Supervise, command, and oversee safety and health management matters under their jurisdiction and coordinate and guide personnel to implement them.

(5) Responsible Persons in Applicable Locations: Assist in implementing the Occupational Health and Safety Management Plan and matters stipulated by occupational safety and health laws and regulations, adhere to recommendations and requirements from competent authorities, legal provisions, and suggestions listed by the Environmental and Safety Center, and ensure the proper implementation of safety and health management. In case of any non-compliance, make improvements promptly.

4. Plan Contents:

(1) Identification, assessment, and control of workplace or operational hazards.

(2) Management of machinery, equipment, or instruments.

(3) Classification, labeling, handling, and management of hazardous chemicals.

(4) Planning and monitoring of sampling strategies for hazardous workplace environments.

(5) Procurement management, contract management, and change management.

(6) Occupational safety and health operating standards.

(7) Regular inspections, focused inspections, operation checkpoints, and on-site inspections.

(8) Occupational safety and health education and training.

(9) Management of personal protective equipment.

(10) Health examinations, management, and promotion.

(11) Collection, sharing, and utilization of safety and health information.

(12) Emergency response measures.

(13) Investigation, handling, and statistical analysis of occupational accidents, false alarms, and events affecting physical and mental health.

(14) Safety and health management records and performance evaluation measures.

(15) Other safety and health management measures.

5. Other Provisions: Matters not specified in these regulations shall be handled in accordance with relevant laws and regulations.
6. These regulations shall be implemented upon approval at the Occupational Safety and Health Committee meeting and shall also apply to any amendments.

### **YunTech Toxic Chemical Substance Management**

#### 雲科大毒性化學物質管理

1. When purchasing a chemical substance, the laboratory personnel of each department should first check whether it is a toxic substance listed by the Environmental Protection Agency (query URL: <https://toxicsdms.epa.gov.tw/Chm> )
2. After enquiry, if it is confirmed to be a toxic substance under the control of the Environmental Protection Agency, immediately confirm to the Environmental Science Center (ext. 2834) whether the school has applied for the approval document for the operation of the toxic chemical substance.
3. After receiving the approval notice from the Environmental Science Center, the purchase can be made from the manufacturer.
4. If the school has not yet applied for operation approval for the toxic chemicals that you want to apply for, you should go to the website of the Center for Environmental Sciences to fill in the application form for approval documents. If the application documents are met, the application should be submitted to the Environmental Protection Bureau in accordance with the school's official document process. And after receiving the notice of the approval of the operation of the Environmental Protection Agency, the department staff who applied for the application will be notified by telephone to apply for purchase.
5. When operating toxic chemical substances in the laboratory, the "Toxic Chemical Substance Operation Record Form" of the Environmental Protection Agency shall be used in accordance with regulations.
6. Before the 1st of each month, each laboratory should report the purchase and operation of the laboratory poisons in the previous month to the poison responsible personnel of the department.
7. The personnel responsible for the poisons of each department should summarize the purchase and operation data of the poisons of the laboratories of the department, and submit the compiled poison operation records to the Environmental Science Center before the 5th of each month.
8. After collecting the information, the Environmental Science Center should check with the purchased application form and the sales record provided by the vendor. After confirming that it is correct, the center will only report to the Environmental Protection Department on a computer to prevent data errors from being checked.

## **2. Measures for liquid waste management at YunTech**

### **Storage Regulations for Hazardous Waste Liquids in Laboratory Sites**

- (1) Hazardous waste liquid should be stored in compatible containers, and non-compatible waste liquid should be stored separately; the compatibility table of harmful waste liquid should

be hung in a prominent place in the experimental place, and publicly known.

(2) The storage container shall clearly indicate the type and nature of the waste liquid stored, and shall be kept in good condition and neat in appearance. If there is any possibility of damage or leakage, it shall be replaced immediately.

(3) Avoid stacking of hazardous waste liquid and keep it away from fire sources. Storage place should avoid high temperature, sun and rain, and maintain good ventilation.

(4) Leakage protection facilities must be installed in the hazardous waste storage place to avoid accidental leakage and cause harm.

10. The operation of hazardous waste liquid shall meet the following requirements:

(1) Each department should fill in the "Toxic Chemical Substances Operation Records Consolidation Form" of the previous month before the 5th of each month, and attach a copy of the "Toxic Chemical Substances Operation Records Form" used by each laboratory to the Environmental Safety Technology Center for consolidation, Report to the competent authority.

(2) Each experimental place shall, if necessary, move the hazardous waste liquid to the waste liquid storage room of the school for centralized storage. Before performing this operation, you need to fill in the laboratory waste operation record delivery coupon and the label of the waste liquid bucket, and it is approved by the Environmental Safety Technology Center.

(3) The Environmental Safety Science and Technology Center shall, depending on the storage conditions of the waste liquid room, handle the removal and disposal of hazardous waste liquids as required, and entrust qualified operators to remove and dispose of them.

11. Each experimental site must be provided with a toxic chemical substance operation record sheet, and the experimental operator should log in relevant information about the procurement, use, inventory, and disposal of toxic chemical substances at any time for the environmental safety science and technology center consolidated declaration and random inspection by the competent authority.

12. In the event of a toxic chemical substance operation accident at each experimental site, the person in charge of the site shall immediately take emergency measures to prevent the spread of pollution and personnel exposure, and immediately notify the Environmental Safety Science and Technology Center, and notify the local environmental protection authority within one hour. The person in charge of the experimental site shall fill in the "Report on Investigation and Handling of Accidents of Toxic Chemical Substances" within three days after the accident, submit it to the Environmental Safety Science and Technology Center to report to the competent authority, and shall know the Environmental Protection Agency.

### **3. Implementation**

The Environmental Safety Science and Technology Center shall, depending on the storage conditions of the waste liquid room, handle the removal and disposal of hazardous waste liquids as required, and entrust qualified operators to remove and dispose of them. Our university has a contract with "the Environmental Resources Research and Management Center of National Cheng Kung University", where is the legal organization for dealing toxic waste. They come to the campus and transport the toxic waste by qualified vehicles.

### 專業廢棄物委託清除合約書

立契約書人：

專業機構：國立雲林科技大學

(以下簡稱甲方)

清除機構：南科環境技術股份有限公司

(以下簡稱乙方)

茲因甲方委託乙方代為清除專業廢棄物，雙方基於互信及共同遵守環保法規相關規定，同意簽訂合約內容如下，其茲選錄：

#### 第一條、廢棄物種類、性質、數量及代碼

NO	廢棄物名稱	廢棄物代碼	形態	委託清除量
1	其他含有毒重金屬且超過溶出標準之混合廢棄物	C-0119	液態	約 4.8 公噸/年
2	其他含有機氫汙染物且超過溶出標準之混合廢棄物	C-0149	液態	約 2.4 公噸/年
3	有機化合物且超過溶出標準之混合廢棄物	C-0169	液態	約 2.4 公噸/年
4	廢液 pH 值大(等)於 12.5	C-0201	液態	約 4.8 公噸/年
5	廢液 pH 值小(等)於 2.0	C-0202	液態	約 4.8 公噸/年
6	廢油混合物	D-1799	液態	約 1.2 公噸/年
7	其他腐蝕性專業廢棄物混合物	C-0299	固/液態	約 0.2 公噸/年
8	其他腐蝕性專業廢棄物混合物(空瓶)	C-0299	固態	約 0.02 公噸/年
9	其他易燃性專業廢棄物混合物	C-0399	固/液態	約 0.2 公噸/年
10	其他易燃性專業廢棄物混合物(空瓶)	C-0399	固態	約 0.8 公噸/年
11	其他易燃性專業廢棄物混合物(不明)	C-0399	固/液態	約 0.51 公噸/年
12	氯化鎂	B-0204	固/液態	約 0.0002 公噸/年
13	硫酸鎂	B-0205	固/液態	約 0.0001 公噸/年
14	硝酸鎂	B-0208	固/液態	約 0.0001 公噸/年
15	氯化鎂	B-0209	固/液態	約 0.0001 公噸/年
16	苯胺	B-0326	固/液態	約 0.005 公噸/年
17	氯化鉀	B-0214	固/液態	約 0.0004 公噸/年
18	丙烯酸	B-0333	固/液態	約 0.0003 公噸/年
19	苯	B-0363	固/液態	約 0.004 公噸/年
20	四氯化碳	B-0154	固/液態	約 0.002 公噸/年
21	三氯甲烷	B-0164	固/液態	約 0.026 公噸/年
22	三氯化鉀	B-0221	固/液態	約 0.0006 公噸/年
23	重鉻酸鉀	B-0222	固/液態	約 0.014 公噸/年
24	鉻酸鉀	B-0238	固/液態	約 0.002 公噸/年
25	二溴乙烷	B-0131	固/液態	約 0.0005 公噸/年
26	四氯乙烯	B-0159	固/液態	約 0.001 公噸/年
27	三氯乙烯	B-0160	固/液態	約 0.0024 公噸/年

### 專業廢棄物委託處理契約書

立契約書人

專業機構：國立雲林科技大學

(以下簡稱甲方)

處理機構：國立成功大學環境資源研究中心資源回收廠(以下簡稱乙方)

茲依據「廢棄物清理法」、「教育機構專業廢棄物共同清除處理機構管理辦法」

相關之規定，由甲方委託乙方處理甲方所產生之專業廢棄物，雙方同意共同訂定契約，約定條款如後：

#### 第一條、甲方委託處理之廢棄物種類及數量

廢棄物種類	廢棄物代碼	型態	預估年產出量
其他含有毒重金屬且超過溶出標準之混合廢棄物	C-0119	液態	約 4.8 公噸/年
其他含有機氫汙染物且超過溶出標準之混合廢棄物	C-0149	液態	約 2.4 公噸/年
有機化合物且超過溶出標準之混合廢棄物	C-0169	液態	約 2.4 公噸/年
廢液 pH 值大(等)於 12.5	C-0201	液態	約 4.8 公噸/年
廢液 pH 值小(等)於 2.0	C-0202	液態	約 4.8 公噸/年
廢油混合物	D-1799	液態	約 1.2 公噸/年
其他腐蝕性專業廢棄物混合物	C-0299	固/液態	約 0.2 公噸/年
其他腐蝕性專業廢棄物混合物(空瓶)	C-0299	固態	約 0.02 公噸/年
其他易燃性專業廢棄物混合物	C-0399	固/液態	約 0.2 公噸/年
其他易燃性專業廢棄物混合物(空瓶)	C-0399	固態	約 0.8 公噸/年
其他易燃性專業廢棄物混合物(不明)	C-0399	固/液態	約 0.51 公噸/年
氯化鎂	B-0204	固/液態	約 0.0002 公噸/年
硫酸鎂	B-0205	固/液態	約 0.0001 公噸/年
硝酸鎂	B-0208	固/液態	約 0.0001 公噸/年
氯化鎂	B-0209	固/液態	約 0.0001 公噸/年
苯胺	B-0326	固/液態	約 0.005 公噸/年
氯化鉀	B-0214	固/液態	約 0.0004 公噸/年
丙烯酸	B-0333	固/液態	約 0.0003 公噸/年
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二溴乙烷	B-0131	固/液態	約 0.0005 公噸/年
四氯乙烯	B-0159	固/液態	約 0.001 公噸/年
三氯乙烯	B-0160	固/液態	約 0.0024 公噸/年
聯二氯苯	B-0144	固/液態	約 0.001 公噸/年

Contract with the toxic waste handling vendor.






Contract with the toxic waste disposal agency.



(1) Storage place for toxic waste



(2) Qualified vehicles for transporting toxic waste.

廢液種類	貼紙標示	警示標誌
有機廢液 (鹵素)		
有機廢液 (非鹵素)		
有機廢液 (廢油)		
酸系廢液		
鹼系廢液		
重金屬廢液		



(3) Toxic waste classification.

(4) Laboratory waste is classified and stored.



## Item 2. Policy and implementation of waste reduction and recycle

Policy created: 2008

Policy reviewed: 2015

In order to prevent environmental pollution, promote the correct concepts and habits of campus waste reduction, resource recovery and reuse, so as to improve the quality of the environment and implement environmental protection education on campus, the school has established the key points for waste reduction and resource recovery management, Key points for management of toxic chemical substances and hazardous wastes. **This information is also included in YunTech's annual publicly issued sustainability report.**

### 1. Policy of waste reduction and recycle

In 2008, YunTech established the "Waste Reduction and Recycling Policy." This policy governs the procedures, division of responsibilities for waste disposal, measurement, analysis, and recycling.

#### YunTech waste reduction and recycle policy

- Policy created : 2008
- Policy reviewed: 2015

<https://en.yuntech-csr.tw/wp-content/uploads/2020/12/93945fc605c3b8be5.pdf>

#### YunTech waste reduction and recycle policy

Policy created: April 22, 2008, 2007 Academic Year, Adopted at the 8th Administrative Meeting

Policy modified: September 22, 2015, 2015 Academic Year, Adopted at the 8th Administrative Meeting

1. The purposes of the policy are to prevent environmental pollution, promote correct concepts and habits of campus garbage reduction, resource recovery and reuse, so as to improve the quality of the environment, implement campus environmental education.
2. Implementation object: whole school staff and students
3. The cooperation of various units in waste reduction and resource recovery is as follows:
  - (1) Environmental Safety Technology Center
    - (a) Responsible for the route planning of garbage trucks and resource recovery vehicles.
    - (b) The statistics of the amount of resources recovered and the amount of garbage cleared and related information are reported online.
    - (c) Cooperate with activities such as garden games, freshman lectures, labor safety and health education and training, and labor camp team leader training to strengthen students' concept of environmental protection at any time and place to achieve the purpose of reducing waste on campus.
    - (d) Responsible for the collection of toner cartridges and waste dry batteries and the statistics of the amount of recycling.
    - (e) Responsible for the treatment of laboratory waste liquid and waste medicine.
  - (2) General Affairs Office
    - (a) Responsible for the purchase of various hardware equipment.

- (b) Responsible for the recovery and quantity statistics of fluorescent tubes (the monthly report is submitted to the Environmental Safety Technology Center).
  - (c) Responsible for the disposal of garbage and resources.
  - (d) Supervise welfare agencies and restaurants to implement waste reduction and resource recovery.
  - (e) Supervise the disposal of waste cooking oil in school cafeterias.
- (3) Academic Affairs Office
- (a) Counsel students on campus to perform resource recovery.
  - (b) Counsel dormitory autonomous cadres to promote resource recovery.
  - (c) Cooperate with labor service courses to implement resource recovery and other related matters, and incorporate resource recovery into labor service courses.
  - (d) Teach students environmental protection associations and volunteers to help promote resource recovery.
  - (e) Make use of school-wide activities to strengthen the promotion of waste reduction and resource recovery.
4. Waste removal time
- (a) Resource Waste : Every Monday to Saturday 16: 40 ~ 17: 50
  - (b) Resource Waste : Every Monday, Wednesday and Friday
  - (c) Collection method: non-landing method
5. According to the “Enforced Classification of Waste” policy of the Environmental Protection Agency, the waste is classified into three categories: “general waste”, “resource waste” and “kitchen waste”.
6. General garbage: It is collected by the general waste vehicles out of the school's commission. If garbage is not classified according to regulations, that is, if the garbage contains recyclable resources, the general waste vehicles will be rejected. In the same situation, the resource recovery vehicles will also refuse general garbage.
7. Resource waste:
- (a) Resource waste: Paper, iron cans, aluminum cans, PET bottles and others are collected by resource recovery vehicles.
  - (b) Each unit shall collect and send the waste toner cartridge, waste batteries (including waste batteries, general dry batteries, mobile phone batteries, etc.), and waste discs to the Environmental Safety Technology Center for unified recycling.
  - (c) Waste Fluorescent Tubes: The General Affairs Office shall collect the waste uniformly and declare the quantity statistical form to the Environmental Safety Technology Center.
8. Kitchen Waste: including the raw kitchen waste and cooked kitchen waste.
9. Enormous Garbage: Large scale waste (including waste tree branches, abandoned students' works, etc.) Arrange the date of cleaning and transportation, and then inform each unit.
10. According to the contract, the construction company is responsible for cleaning and transporting the waste of each unit generated during the maintenance.
11. The waste produced by the laboratory of our school belongs to business waste. According to the Waste Cleaning Law, the waste types are divided into general waste type and business waste type.

- (a) Hazardous Business Waste: Laboratory waste generated from the chemical test in the laboratory. The waste is sent to the Environmental Safety Technology Center for centralized treatment. The Environmental Safety Technology Center will send the waste to the legal waste incineration plant or the successful university resource recovery plant for treatment.
  - (b) General Business Waste: Non experimental waste (such as: packaging of experimental consumables, papers, breathing masks, etc.)The waste is directly thrown to the garbage truck and recycling truck.
12. Matters needing attention:
- (a) Please fold the paper and carton before recycling.
  - (b) Avoid contamination by oil, water or dirt from paper recycling.
  - (c) Before recycling, please remove the straws and tube sleeves and flatten the iron cans, aluminum cans, PET bottles, and plastic cans to reduce the volume of the empty bottles. Pour off the unused drinks and wash.
13. The policy has been approved by the school administrative meeting. The president should sign to implement them. The same applies to amendments.

## 2 Implementation

### 2.1 Waste classification and recycling

The resource waste of the university is collected by the recycling vehicle for recycling. The waste toner cartridge, waste batteries are recycled, and the abandoned bicycles on campus are auctioned by the Environmental Safety Technology Center for reuse.

Recycling waste materials such as waste toner cartridges and batteries on campus are recycled by recycling vehicles for further resources recovery treatment. The abandoned bicycles on campus are centrally repaired and auctioned off by the Environmental Safety Technology Center.



EPA garbage trucks collect non-resource waste



Non-General Garbage Collection and Delivery



(1) Types of garbage classification



(2) Waste Recycling vehicles



(3) The recycled items are sent to the resource recycling site for classification and reuse



(4) Recycling program for battery



(5) Recycling Program For Bicycles

	
<p>(6) The contract of large recycling waste and electronic devices with the qualified company.</p>	<p>(7) Recycling program for waste electronic devices</p>

- (1) The garbage is classified in our campus by thier types including aluminum, plastics,glass...etc.
- (2) The resource waste of the university is collected by the government’s recycling vehicles.
- (3) The recycled items are sent to the legal resource recycling site for classification and reuse.
- (4) The waste batteries are recycled.
- (5) The abandoned bicycles on campus are auctioned by the Environmental Safety Technology Center for reuse.
- (6) The waste electronic devices are recycled.

## 2.2 Organic Waste Treatment

We implement the "Keep Trash Off the Ground" Policy, and strengthen waste separation and recycling. The organic wastes such as vegetables and plant residuals are collected by the recycling company and used for composting or breeding earthworms to increase soil porosity and facilitate the growth of campus plants.



(1) The leftover from the kitchen



(2) The leftover from the restaurant



(3) Example of Organic Waste Treatment for Recycling Use (compost from kitchen waste)



(4) Example of Organic Waste Treatment for Recycling Use (Using compost for farming earthworms)



(5) Example of Organic Waste Treatment for Recycling Use  
Using compost for farming vegetables



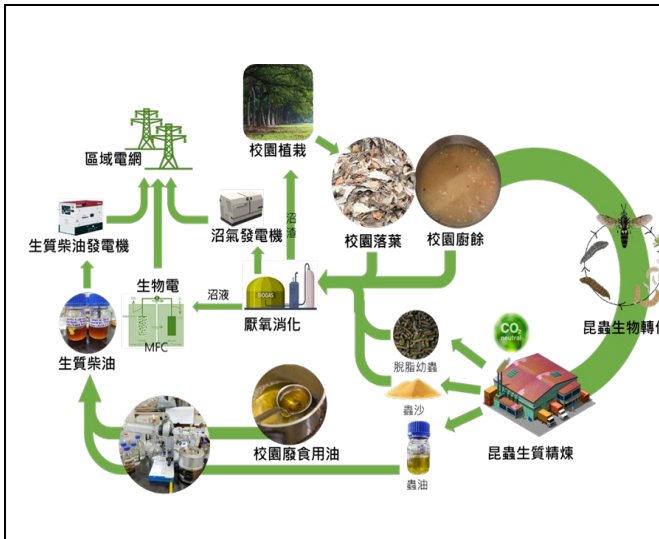
(6) Example of Organic Waste Treatment for Recycling Use  
Using compost to farming flowers



(7) Example of Organic Waste Treatment for Recycling Use (Using compost to farming vegetables)

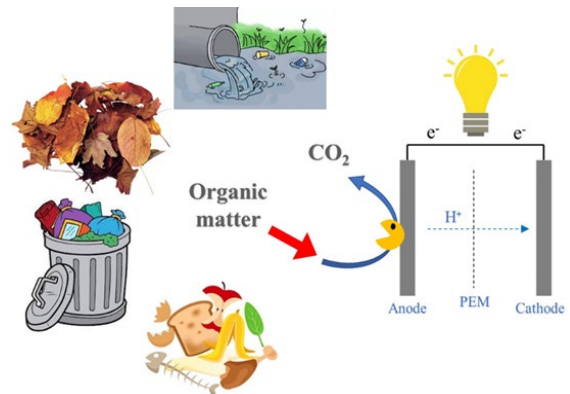
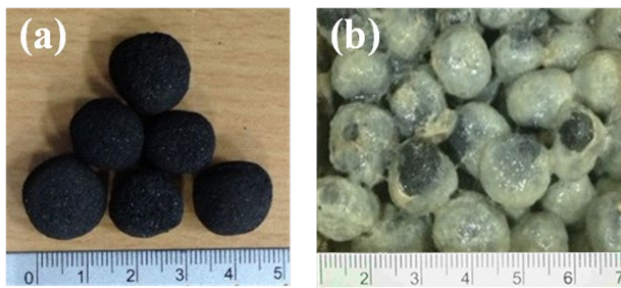


(8) Leftovers in the restaurants on campus are collected and shipped to the farms to feed chickens.



(9) Construction of microgrid of biomass energy

(10) using waste gas to lighten up light bulbs



(11) Filter material / contaminated filters

(12) Renewable green power: Microbial fuel cell



(13) 蒐集校園落葉 Collecting fallen leaves on campus.

(14) 於校園內進行堆肥 Composting on campus.





(15)校園內樹枝堆置 Stacking tree branches on campus



(16)樹枝以破碎機破碎後再利用 After being shredded with a wood chipper, the tree branches are reused.