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 **SDGs**

SUSTAINABILITY REPORT
TAMKANG UNIVERSITY

2022





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FOREWORD

Tamkang University was founded in 1950 and has been in existence for 70 years while always attaching great importance to campus sustainability. From 2011 to 2013, it won Taiwan's Enterprise Environmental Protection Award for three consecutive years, and was awarded the "Honorary Enterprise Environmental Protection Award." In 2012, Tamkang was a permanent member of the Taiwan Green University Alliance, linking the power of various universities to jointly promote the work of green universities.

Times Higher Education (THE) in the United Kingdom conducts a ranking of university influence and measures the contribution of universities based on the 17 sustainable development goals announced by the United Nations. According to the niche and conditions to participate in this ranking, the university selected 7 sustainable development goals as evaluation items, including the 4th sustainable development goal of the "Quality of Education," the 6th goal of "Water Purification and Sanitation," the 7th goal of "Affordable Clean Energy," the 8th goal of "Employment and Economic Growth," the 11th goal of "Sustainable City," the 12th goal of "Responsible Consumption and Production," and the 17th goal of "Global Partnership."

Based on these 7 sustainable development goals, the report summarizes the university's four aspects of research, teaching, service, and campus governance. It further elaborates on the university's commitment to social responsibility and the efforts to promote the sustainable development of humanity. Under the joint efforts of all faculties and students, Tamkang looks forward to the implementation of the goal of sustainable development within the community.

Dr. Huan-Chao Keh

President, Tamkang University



NO POVERTY



1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.



International Volunteering Service Team “Economics and Education”

Since 2019, the international volunteering service team “Economics and Education”, which is led by Professor Lin from the Department of Economics has been visiting remote areas of Cambodia every year during winter and summer vacations, cooperating with the local non-profit organization ECC school, to carry out international education work, including English teaching, computer teaching, environmental hygiene education, and

local cultural surveys. This team, whose name is a pun on the exclamation mark, hopes to create many amazing exclamation marks around the world.

The village where ECC school is located is close to the World Heritage site Angkor Wat. It is a poor village where the local children generally hope to become tour guides with substantial income in the future, so they need English and computer skills to develop the tourism industry. Tamkang University hopes, by exporting education to the local area through a team of teachers and students, to accomplish the short-term goal which is to educate and guide through the Tamsui experience, and the long-term vision which is to help local villagers establish self-learning abilities.

In 2022, the “Economics and Education” team flight to Cambodia to undertake volunteering service from August 7th to 21st. Due to the impact of the COVID-19 pandemic, this was the first time

they went there after two and a half years. They taught courses and after-school lessons for primary and middle school children in the poor areas of PO Village, Siem Reap Province, Cambodia, including English, computer, and Chinese. Professor Lin, the head of the team, firmly believes that education is the best way to change the future destiny. Even in places without clean water sources, electricity, and internet, the children's desire for knowledge drives the volunteers of “Economics and Education” to give without regret.

Cambodia is a country where mobile phones are widespread but has almost skipped the computer era. The “Economics and Education” team applied to ASUS for a considerable number of refurbished computers. Each time they set off, the team members had to carry batches of refurbished computers sponsored by ASUS to the local area to help develop computer and technology education, allowing children in poor villages to see a broader world through the internet and technology.



August coincides with the rainy season in Cambodia. The poor village does not have floors paved with asphalt and tiles, only muddy streets. The “Economics and Education” team members carried dozens of computers every morning and walk through the mud to the primary and secondary schools where the village children gathered. What gratifies the volunteers is that on the way to the local primary and secondary schools, the team passed the Siem Reap River and the residents by the river greeted them kindly. It turns out that when they served two years ago, they arranged to lead local primary school students to clean the river after school. Professor Lin provided some suggestions to the locals at that time, teaching them to set up fishing nets on both banks to collect the garbage. The residents pointed to the distance of the river, and Lin exclaimed: “Looking over from the river, I saw three or four river cleaning nets, which shows that the previous earnest advice not

only can immediately improve their living environment, but the knowledge and methods taught will indeed ferment slowly in the future.” With their own hands, they have improved their living environment step by step. The river surface is no longer full of garbage like two years ago, and the local government has also begun to rectify the river during the epidemic, reducing the chance of flooding in the future, which is beneficial to local economic development.

In addition to continuing the English and computer teaching projects carried out in the past, a community health education workshop was also held. The person in charge of ECC helped to call on the local leaders and students of the surrounding five villages to participate. The workshop was themed “Clean Water”, teaching local residents how to obtain safe drinking water through processes such as sedimentation, filtration, and boil-

ing. At the end of the process, they also brewed a cup of tea from Shimen, Taiwan, with this safe drinking water for the participating residents to taste, successfully combining health education and cultural exchange. The workshop also taught residents how to wash their hands correctly, hoping that through the step-by-step guidance of the “Economics and Education” volunteers, the hygiene and health of PO Village can be improved.

In addition, the team also provided the documentary filmed during the local service to the participants of the online conference by holding an international seminar, and discussed the relationship between rivers and people, ecology and people, environment and people, and urban development and people at the conference based on the experiences of Tamkang University, Chung Yuan Christian University, Kaohsiung Medical Univer-

sity, and Nanhua University. Professor Lin and her team hope that such a real presentation can let the public see a different Cambodia and let Taiwanese people understand Cambodia better! At the same time, through the service in Cambodia, students' horizons can be expanded to understand the world, and they can realize the responsibility of economists to the world, and share knowledge and love to places in the world that need it, forming the nourishment for local growth and change, truly embodying the value and significance of Tamkang University's implementation of sustainable development goals.





ZERO HUNGER



2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.



The USR Project “Agriculture Literacy Education - Non-toxic, Organic Tamsui Impression”

The USR project “Agriculture Literacy Education - Non-toxic, Organic Tamsui Impression” starts from environmental care, grain planting, healthy dining table, and food saving to help local areas discover needs and solve problems. With the three main axes of knowing agriculture, experiencing agriculture, and creating agriculture, it connects various industries, cultivates public attention to agricultural education awareness, understanding of the food and agriculture industry, and creates and bridges the connection between school education and community and local food and agriculture. Starting from the place of production, linking topics and activities, conveying the stories and culture carried by people and food. The related activities in 2022 include:

1. Free courses that offer certificates or awards

The Department of Economics of the school and the Fubon Life Insurance, recognizing the unique terraced paddy farming methods in the

Shimen area of Sanzhi, and the challenges posed by agricultural globalization and mechanization, hope to support it through contract farming. Therefore, in 2021, they signed contracts with the Songshan Community Development Association and Zhiqing Studio, taking practical actions to support local agriculture. Moreover, when time permits, they actively participate in farming, allowing students and company members to better understand local agricultural culture

2. Launching a Micro Course on Food and Agriculture Education

In conjunction with local young farmers and food industry lecturers, and with the core theme of “good agriculture requires good eating”, the school offered about sixteen classes in 2022. The course content covers local food and drink, local history, and the characteristics of local products. Through a combination of hands-on practice and experiencing activities, under the guidance of



industry teachers hosts, teachers, staff, students, and community members participating in the course can enhance their knowledge of food and agriculture education.

3. In-depth Local Field Research

The North Coast area generally suffers from the problem of population outmigration. According to statistics from the Ministry of the Interior at the beginning of 2022, Shimen District is among the top seven areas in Taiwan with a negative social growth rate. Second-year students from the Department of Management Sciences conducted field research in Shimen District during the summer vacation, focusing on the Songshan Community in Shanxi Village and the Chuhuankou Farm, where the population outflow is most noticeable. The community, which had less than a dozen households more than a decade ago, has become a famous community-building case in Taiwan after local community building efforts. The students visited local residents and public de-

partments multiple times, and announced their research results at the North Coast Seven Schools Agricultural Joint Seminar held by this project in November.

4. Joint Marketing Planning with Local Young Farmers

In collaboration with the New Taipei City Government's Agriculture Bureau to promote the rejuvenation of agriculture in New Taipei City, we combined the marketing expertise of the 5% Design Action company, allowing university students to enter the local field, unleash their creativity, and brainstorm new marketing directions with local young farmers. Students from the Department of Public Administration and Finance, in cooperation with Yiliang Tea House in Shimen District, launched a tea culture creative action themed "Finding Tea in Shimen", and presented it at the Beekeeping Farm in Sanzhi District on November 15.

5. Turning waste into nutrients for the land

In collaboration with the Shuxing community and Shulinko farm in Tamsui district, we guide students into the agricultural community to promote sustainable agriculture. Agricultural waste is composted and transformed into organic fertilizer beneficial for crops and soil.

6. Campus Food Nutrition Survey

Students from the Department of Management Sciences, Department of Spanish, and Department of Education, with the assistance of this project and the Student Affairs Office, cooperated with FamilyMart in the "Management" course of the Department of Management Sciences. They joined the "New Perspectives on Food" project implemented by the school's health care team of nurses and dietitians. They conducted a survey on the combination of healthy and nutritious meals in convenience stores, compared the questionnaires and purchase data of nearly a thousand people,

and compiled a report on the nutritional situation of the school's faculty and students using convenience stores for lunch.

7. Developing Local Cultural Activities

In cooperation with the local Tamsui team, Chuang Chuang Lu Studio, and local fishermen, we organized the "Tamsui River Sandbar - Raking Venus Clams in Summer" event. In the past, the Tamsui River was severely polluted, with turbid and foul-smelling water. However, with the joint efforts of the government and the public, it has restored its glory. Stepping on the sandbar, actually using eyes to observe the sandbar, hands to touch the river water, and tools to rake for Venus clams, we can reacquaint ourselves with the Tamsui River, our mother river.





GOOD HEALTH AND WELL-BEING

Target

3.9 *Reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.*

Action

Promoting sustainable agriculture, reducing sources of environmental pollution

The USR project “Agriculture Literacy Education - Non-toxic, Organic Tamsui Impression”, with the core of continuity, carbon reduction, and sustainable homeland, cooperates with local agricultural development groups such as Tamsui Wisteria Coffee Garden, Yi Liang Tea House, and Shimen Songshan Community Terraced Fields. We lead our school's teachers and students and local residents in activities such as soil improvement, farmland intercropping, tea farming promotion, and agricultural experience, to promote sustainable agriculture, reduce sources of environmental pollution, and thereby simultaneously enhance the health and well-being of people and the environment.

Setting up a sewage treatment system, protecting water sources

To achieve the goal of not polluting river water quality, the sewage from the Tamsui campus is fully incorporated into the public sewage pipeline of New Taipei City, concentrated to the government-established Tamhai Sewage Treatment Plant for treatment, with the school bearing the cost of sewage treatment. The sewage is treated to meet national discharge standards before being discharged through the equipment of the treatment plant.

Promoting water resource management and hygiene through academic research

To provide quality water resource management education and research, the school has a Department of Water Resources and Environmental



Engineering, as well as a school-level research center “Water Environment Information Research Center”. The main goal of the research is to echo to the United Nations Sustainable Goal of “Clean Water and Sanitation”, and to continue to cooperate with the government, private enterprises or the third sector. Related actions include assisting private enterprises in treating industrial wastewater, enhancing the water quality testing capabilities of water purification plants, and jointly developing clean water technology. The professor of the Water Environment Department obtained the patent for the “Fluoride Wastewater Treatment System”, which can improve the efficiency of wastewater treatment and solve the difficulties of small and medium-sized enterprises due to lack of space and equipment. Currently, it is cooperating with a well-known power plant to assist in the construction of wastewater treatment equipment, and will continue to cooperate with the industry to make fluoride-containing

wastewater reusable in the circular economy, creating a win-win situation for economy and environmental protection.

Cambodia Volunteer Service

From August 7 to 21, 2022, the “Economics and Education” team went to Cambodia as international volunteers and held a community health education workshop, with the person in charge of ECC mobilizing local leaders and students from five surrounding villages to participate. The workshop, themed “Clean Water”, taught local residents how to obtain safe drinking water through processes such as sedimentation, filtration, and boiling. At the end of the process, this safe drinking water was used to brew a cup of tea from Shimen, Taiwan, for the participating residents to taste, successfully combining health education and cultural exchange. The workshop also taught residents how to wash their hands correctly, hoping



that through the step-by-step guidance of the “Economics and Education” volunteers, the hygiene habits and health of the residents of PO Village can be improved.

Flood forecasting system, early warning of water disasters, reducing disasters

The teachers of our school's Department of Water Resources and Environmental Engineering led a team (Water Environment Information Research Center) to assist Yunlin County in setting up a “Smart City Flood Forecasting System”. Using real-time monitoring data from the Internet of Things, combined with a time-series flood forecasting model, and then through actual rainfall events to verify and correct the model, early warnings can be issued before water disasters occur. The related research, titled “Self-organizing maps

of typhoon tracks allow for flood forecasts up to two days in advance”, was published in the 11th volume of “Nature Communications” in 2020 (Nature Communications volume 11, Article number:1983(2020)), and through cooperation between the Taiwan Hydrological Information Society and the Malaysian government, a regional flood forecasting system was set up in Malaysia through technical output.





QUALITY EDUCATION

Target

4.7 Ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development.

Action

Featured Twin Tower Courses

Starting from 2022, AI and Sustainability “Featured Twin Tower” courses are launched. The courses “AI and

Programming Language” and “Exploring Sustainability”, each worth 1 credit, are included in the compulsory courses for freshmen to help students understand sustainable development and learn AI. Under the concept of “sustainable governance”, the Center for Sustainable Development and Social Innovation serves as a hub to collaborate with all colleges in the school to cultivate the “sustainability” education of the school. The “Exploring Sustainability” course is offered to guide students through the process of social awareness, social participation, and social innovation, enriching the two core competencies of “exploration” and “sustainability”. At the same time, school-wide AI technology and cloud service courses are offered to promote the innovative transformation of teachers and students throughout the school and accelerate the implementation of SDGs.

Open Courses and Open Digital Learning Platform

The school is committed to promoting life-long learning and values the social responsibility of universities. It provides online learning courses



and offers general courses and lecture courses for free through the “Open Course Youtube Channel”, providing higher education resources for the public. The open digital learning platform “iClass Learning Platform” and “Moodle Distance Learning Platform” provide free and open educational resources such as Massive Open Online Courses (MOOC) for online learners around the world.

Lifelong Learning Courses

Leisure courses are offered for the elderly to learn as they age; MOS professional certification courses are offered, and certification exams are held every year; various professional certification training courses, on-the-job training courses, and services for the visually impaired are offered, providing lifelong learning opportunities for the public.

World Citizenship Education Courses

The College of Education of our school undertakes many cooperative projects, crossing public and private domains, such as “Learning Community under Learning Leadership”, “World Citizenship Education Workshop”, “Future Workshop for Economically Disadvantaged Workers”, “iEARN International Professional Education Knowledge Workshop”. Long-term cooperation with the New Taipei City Government and other local schools to implement new curriculum courses and hold teaching seminars. Among them, teachers from the Department of Education and Future Design cooperate with many primary and secondary schools in New Taipei City, and through video connection with Oxfam Hong Kong, jointly promote world citizen education courses, through case teaching, issue teaching, innovative teaching and other courses and simulation drills, leading primary and secondary school students to understand the operation of social systems, participate in public affairs discussions, and cultivate students' ability to analyze, express opinions and make decisions.



Professional Service Learning and USR

Departments offer professional service learning courses and student clubs to serve in communities or elementary and high schools; physical education teachers go to various neighborhoods and communities in Tamsui District to promote diversified sports courses for the elderly; the “University Social Responsibility Practice Plan” is committed to promoting social responsibility and SDGs, holding various activities, such as food and agriculture education, Tamsui-Lanhai light travel and learning-type urban and rural construction, and often holding lectures, workshops and community education courses open to the public.

Open Library Resources

The library provides free use of library books, audio-visual materials, e-books, and e-



journals. Non-school personnel can enter the library with a certificate; the library sets up an EU Information Center (EUi), in addition to EU official publications, it also provides books and journals on European and EU research topics, and issues e-newsletters (free subscription), open to all for consultation and use, and provides non-school personnel with paid computer use.

Resource Center for the Visually Impaired

Our school is one of the few schools in Taiwan that pioneered the admission of visually impaired students, and established the only Resource Center for the Visually Impaired in the country. Later, the service targets were expanded to people with disabilities of different categories. The service items include assistance and guidance in life

and employment, helping people with disabilities to overcome innate disadvantages and enhance employability. In 2003, commissioned by the Ministry of Education, it handled the business of the Auxiliary Center for the Visually Impaired in Colleges and Universities and High Schools and the Braille Book Business, and established the Chinese Braille Library, providing all-round book information services for the visually impaired; in 2009, it cooperated with Chunghwa Telecom to establish the first customer service center for the visually impaired in the country, promoting employment opportunities for the visually impaired. Activities in 2022 include:

Plan for the Implementation of Awards and Grants for Students with Disabilities: To promote diverse learning for students with disabilities and assist students with disabilities to prepare for fu-



ture careers, through resource classroom counseling mechanisms or vocational training, etc., awards and grants are given to those with outstanding performance to encourage them to overcome their own disabilities and actively learn, in line with the purpose of counseling students with disabilities in colleges and universities.

All-round Marketing Talent Training Class: This course is co-organized with the Republic of China Accessible Technology Development Association. Through an all-round marketing course, people with disabilities can practice their dreams and cultivate diverse specialties. Through systematic teaching and practical operation, combined with experimental memory and actual operation practice, learning planning and marketing are systematized, which helps to reduce the time to explore the marketing field. The registration target is

to give priority to the visually impaired/visually impaired students.





GENDER EQUALITY

Target

5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.

Action

Gender Equality Education

To promote substantive equality of gender status, eliminate gender discrimination, maintain human dignity, and cultivate and establish educational resources and environments for gender equality, the school has established a Gender Equality Education Committee following the “Gender Equality Education Law” and the provisions of the university’s “Article 20 of the Organizational Regulations”. The responsibilities are as follows :

1.Integrate the relevant resources of all units in the school, formulate an implementation plan for gender equality education, and implement and review its implementation results.

- 2.Plan or handle activities related to gender equality education for students, faculty, staff, and parents.
- 3.Develop and promote the curriculum, teaching, and evaluation of gender equality education.
- 4.Develop and promote the implementation of gender equality education and regulations on the prevention and treatment of sexual assault, sexual harassment, or sexual bullying on campus, establish mechanisms, and coordinate and integrate relevant resources.
- 5.Investigate and deal with cases related to the Gender Equality Education Law.
- 6.Plan and establish a safe campus space for gender equality and regularly review improvement measures.
- 7.Collect information on the prevention and relief of sexual assault, sexual harassment, or sexual bullying on campus.

- 8.Promote family education and social education on gender equality in the community.
- 9.Other matters related to gender equality education in schools or communities.

Gender Equality Measures

In consideration of the hardships of both work and family, the university implements a gender-friendly workplace that cares for children by providing several gender equality measures in terms of leave, including physiological leave, maternity leave, rest and recuperation, maternity leave, paternity leave, family care leave, and leave without pay for childcare.

Gender Equality and Women's Studies

In order to promote gender equality education, the library has set up a gender equality re-



search website to collect materials related to women's studies, gender equality, gender relations, and feminism, and to systematically develop the gender equality collection.

Every March, our school's library, in conjunction with the General Education and Core Curriculum Center, hosts a "Gender Equality Theme Exhibition". In addition to the "Gender Equality Theme Book Exhibition", a series of "Gender Equality Lectures" are also arranged. The theme of the 2022 Gender Equality Month event is "Pioneers on the Road to Gender Equality: A Memorial Exhibition for Women's Movement Pioneers at Tamkang and Professor Chiali Wu".

On the long road to promoting women's rights and gender equality in Taiwan, Tamkang people have played the role of pioneers and advocates, and they are also brave warriors who have

overcome numerous obstacles. From the folk song era of the 1970s, when Professor Zujun Yang held Taiwan's first outdoor charity concert to rescue child prostitutes, to the 1980s when Professors Yuanzhen Li and Chiali Wu promoted women's movement and gender equality, they challenged traditional gender and authority frameworks during the tense martial law period, awakening women's equal rights and self-awareness. This event reviews the impact of Tamkang people on the development of gender equality and women's movement in Taiwan, and commemorates the eternal fighter on the road to gender equality - Professor Wu Jiali, highlighting the school's important contribution to the United Nations Sustainable Development Goal "SDG5 Gender Equality".

Gender Equality Friendly Space

To provide a private, comfortable, and hygienic environment for breastfeeding female faculty and staff, a breastfeeding room was set up in 2014 and renovated in 2018. In 2018, a toilet renovation project was carried out to upgrade the equipment in both the male and female toilets, expanding the space in the female toilets and installing emergency buttons. An all-gender toilet was also set up.



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淡江大學 性別平等教育專區

最新消息 教育宣導 資源分享 關於我們 校務性別統計資訊 活動成果 相關網站

尊重多元性別文化 營造校園友善環境

Respect for multi-sex culture
Create a campus friendly environment





CLEAN WATER AND SANITATION

Target

6.3 Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion untreated wastewater and substantially increasing recycling and safe reuse globally

Action

Establishment of Wastewater Treatment System to Prevent River and Water Source Pollution

Before 2019, Tamsui Campus housed five on-campus sewage treatment plants at the gymnasium, swimming pool, chemical building, engineering building, foreign language building, and another one in Langyang Campus. All the sewage treatment plants were operated and maintained by qualified contractors every year to monitor the operation of the sewage plant equip-

ment. The wastewater produced by the school first enters the sewage plant for chemical treatment, then is discharged into the off-campus sewage pipeline. The quality of the discharged water is subject to regular sampling inspections by the school and aperiodic sampling inspections by local environmental protection agencies. The results have been meeting the discharge water standard.

Starting from 2019, in line with the completion of the government's public sewage system, all wastewater from the Tamsui campus has been incorporated into the New Taipei City public sewage pipeline. It is centrally processed at the government-established Tamsui Wastewater Treatment Plant. Our institution bears the cost of wastewater treatment. The wastewater is treated to meet national discharge standards through the plant's equipment before being discharged, achieving the goal of not polluting river water quality.

To achieve the goal of not polluting the river water, all sewage from the Tamsui campus is now connected to the New Taipei City public sewage pipeline system. It is then centralized and treated at the Danhai Sewage Treatment Plant established by the government. The university bears the cost of sewage treatment, and the sewage is processed by the plant's facilities until it meets national discharge standards before being released.

In addition, the school has established a map illustrating the distribution of tap water pipelines and sewage pipelines on campus, assisting professional hydropower technicians in arranging inspection plans. In the case of abnormal water leakage, repairs will be carried out immediately to avoid cross-contamination between water pipelines. The sewage generated by the laboratory is also subjected to primary treatment before being discharged into the sewage pipe and then taken over to the off-campus sewage treatment plant



through the sewage sewers for further treatment.

Establishment of the Department of Water Resources and Environmental Engineering

Our school has established a Department of Water Resources and Environmental Engineering, divided into the Water Resources Engineering Group and the Environmental Engineering Group. Both are dedicated to ensuring the safety of water use for human society, inspiring students to benefit society through engineering and scientific means.

1. Resources Engineering Group: Based on hydrology and hydraulics, with hydraulic engineering as the main focus, supplemented by information computing technology. The curriculum covers areas such as fluid mechanics, hydrology, open channel hydraulics, flood prevention, coastal engineering, etc., aiming to achieve the sustainable use of water resources for the benefit of water and the removal of its harm.

2. Environmental Engineering Group: Based on water supply and sewage engineering and water quality treatment engineering, combined with waste treatment recycling and air quality monitoring and other scientific fields. The curriculum covers areas such as environmental chemistry, solid waste, water supply and sewage engineering, microbiology, and water quality management, aiming to achieve a vision of safe water quality and sustainable ecological environment.

Establishment of Research Center, Continuous Cooperation with Government, Enterprises, and the Third Sector

Our school-level research center, the Water Environment Information Research Center, takes the United Nations Sustainable Goal of “Clean Water and Sanitation” as its main research objective, and continues to cooperate with the government, private enterprises, or the third sector. The main related actions include:

Participation in government policy formulation and promotion: Our school has more than a hundred teachers serving as consultants and members in government units, assisting the government in formulating or promoting policies related to sustainable development goals. Among them, teachers from the Water Environment Department serve as independent directors of Taiwan Water Corporation under the Ministry of Economic Affairs, assisting the Environmental Protection Agency in promoting the Water Safety Plan; serving as members of the “Deji Reservoir Catchment Management Committee” under the Ministry of Economic Affairs, promoting the government's promotion of sustainable development goals related to water resources.

Assisting private enterprises in dealing with industrial wastewater, enhancing the water quality testing capabilities of water purification plants, and jointly developing clean water technology: Professors from the Water Environment Department research wastewater treatment methods, with the primary goal of reducing pollutants in

wastewater before discharging them into rivers, so that wastewater does not harm nature. Physical and biological treatment technologies are applied to remove hardness from tap water and heavy metals from industrial wastewater; they also receive subsidies from the Ministry of Science and Technology to research technologies that combine membrane, chemical reduction, high-pressure biological treatment processes, flotation, and extraction processes to remove heavy metals from water. By improving the efficiency of wastewater treatment, it solves the difficulties of space and equipment shortage for small and medium-sized enterprises, encouraging more operators to effectively solve the sewage problem and reduce river pollution.

Outreach Water Resources Management Education

Chemistry on the go: The “Chemistry on the go” activity is designed, which is a promotional tour service supported by the Ministry of Science and Technology, the Ministry of Education, the Chemistry Society, and the industry. A modified

truck is used to conduct science popularization activities in primary schools, junior high schools, and communities across the country. Through a combination of lectures, sample collection and analysis, and experiments, water resource-related issues are discussed.

Cambodia ECC Partner Plan: Our school cooperates with the Cambodian NGO ECC school for international education work, incorporating environmental health education as a necessary course, leading primary school students to carry out river cleaning work in the PO village section of the Siem Reap River. By observing the types of garbage, it shapes the local people's awareness of hygiene and the concept of water resource conservation.



7 AFFORDABLE AND CLEAN ENERGY



AFFORDABLE AND CLEAN ENERGY

Target

7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.

7.3 Double the global rate of improvement in energy efficiency by 2030.

Action

Conducting Energy efficiency inventory and auditing

Since implementing ISO 14001 Environmental Management Systems in 2003, TKU has gradually implemented various energy-saving measures. In 2006, we established an energy-saving monitoring system. In 2013, we conducted campus greenhouse gas emissions verification in accordance with ISO 14064-1 standards. Since we obtained ISO 50001 Energy Management standards in 2015, we have achieved an annual electricity reduction rate of at least 1% on the Tamsui campus for the past eight years. Our electricity costs have also

decreased from the peak of NT\$91.26 million per year to NT\$70.09 million per year in 2022. Within the university, we have established the “Environmental Sustainability and Management System Promotion Committee” to supervise, review, and assess the effectiveness of various energy-saving plans.

Promoting Energy Efficiency and Carbon Reduction Measures on Campus

1. Energy saving air-conditioning: The energy-saving improvement project budget is prepared every year, and the energy-consuming air-conditioning equipment of the older model is replaced with a new high-efficiency air-conditioning equipment.
2. Lighting energy conservation: The budget is prepared year by year, and the traditional lamps in the teaching space and office space are replaced with LED energy-saving lamps.

3. Smart Campus: TKU Collaborated with Microsoft to create an “All-Cloud Campus” and partnered with Far EasTone Telecommunications to build a “5G Metaverse Net Zero Carbon Emission Campus.” We utilizes digital technology to support teaching and administrative tasks, reduce carbon emissions and enhance process efficiency.

4.Reduction of contracted electricity capacity: In the 2022 academic year, the Tamsui campus continued to target a 1% reduction in the Energy Use Intensity (EUI) to reduce contracted electricity capacity.

5. New and regenerated buildings: According to the resolution of the Campus Planning Committee of the university, no new buildings will be built in the next 5 years (2020-2024). In the future, if there are new construction plans for the Tamsui campus, the Taipei Campus and the Lanyang campus, priority will be given to evaluating the durability of the old buildings and moving towards the principle of space activation and reuse, that is, the reconstruction of the original site will be the main focus, and the non-permeable paving of the campus will not be increased, which can reduce the impact of the



campus environment and avoid the waste of building materials resources.

6. Green procurement: When purchasing hardware and software equipment, consumables, and construction engineering materials, the university will give priority to manufacturers who can provide the five major green label products: environmental protection labels, energy-saving labels, water-saving labels, green building materials labels, and carbon labels.

7. The advancement of sustainable transportation: The school has partnered with bus companies to introduce electric buses, aiming to reduce carbon emissions from transportation. The school has installed electric vehicle charging stations on campus to facilitate the use of electric vehicles. The school encourages the replacement of official vehicles with electric models as a priority. This not only reduces the school's carbon footprint but also sets a good example for students and staff.

8. Carbon sequestration through planting: A total of 90 species of trees are widely planted in the Danshui campus, totaling 1,692 trees, with a total carbon sequestration amount exceeding 478,899kgCO₂e. The campus also uses ecological ponds to pilot microalgae cultivation for carbon sequestration.

9. Negative emission planting: Using regenerative organic farming methods, kitchen waste compost is mixed into the soil as a base fertilizer, increasing the microorganisms in the soil for absorption and utilization by plants, thereby reducing the concentration of carbon dioxide in the atmosphere.

Promoting measures to increase the share of clean energy

In 2021, we collaborated with the alumni company SINBON Electronics to bring green power to the campus. A solar photovoltaic system was set up on the top floor of the Tamsui campus gymnasium and swimming pool, with a total of 1,636 solar photovoltaic panels being installed in the process. The total wattage of the system is 542.52kW. As of the end of July 2023, the total power generation capacity was 1,054,128 kWh, and the carbon reduction benefit was 536.55 metric tons of CO₂e. Starting in March 2022, a canopy-type solar photovoltaic system with a total capacity of 99.9 kW was installed on the roof of the Taipei campus. As of the end of July 2023, the total electricity generated amounted to 52,024 kWh, resulting in a carbon reduction benefit of 26.48 metric tons of CO₂e.

Participating in the National Energy Efficiency Benchmarking Award competition

In 2011-2013, TKU was awarded the “National Enterprise Environmental Protection Award” for three consecutive years. In 2017, our university received the silver award of the “Energy Saving Benchmark Award” from the Ministry of Economic Affairs. In 2019, the newly constructed Hsu Shou-Chlien International Conference Center at the Tamsui campus was awarded the Silver-level Green Building certification. In 2022, we further achieved the gold award of the “Energy Saving Benchmark Award” from the Ministry of Economic Affairs, becoming one of the exemplary institutions in energy conservation and efficiency.

Exerting Influence

TKU has responded to and signed “The Talloires Declaration” and co-founded the “Green University Union of Taiwan” with several other universities in 2013. Since 2019, President Huan-Chao Keh has served as a supervisor of the Union and, as a director starting from 2022. Moreover, faculty members from various departments, including Architecture, Chemical and Materials Engineering, Water Resources and Environmental Engineering, Computer Science, and Economics, are all actively involved in the field of energy. They contribute to making an impact through roles such as serving as evaluators, leading research projects, or providing training for government agencies in collaboration with industry, government, and academia.

TKU assumes a demonstration role in “Glocalization,” leading the collective growth of

primary and secondary schools in the Tamsui, Lanyang, and North Coast regions. At the end of 2019, in collaboration with seven primary schools, local NGOs, and the Tamsui District Office, we announced the “Ecologically Sustainable Tamsui Declaration,” initiating a series of clean energy projects. These initiatives include replacing campus shuttle buses with all-electric buses and allocating a budget for electric company vehicles. Starting in 2021, we gradually established solar photovoltaic systems at each campus. As of October 2023, the total power generation capacity from the solar panels on 3 physical campuses has reached 761.22 kW. Simultaneously, we collect electricity usage data and collaborate with fields such as information technology, computer science, electrical engineering, and Electronics to nurture talent in the field of renewable energy.





DECENT WORK AND ECONOMIC GROWTH

Target

8.5 Achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

8.6 Reduce the proportion of youth not in employment, education or training.

8.9 promote sustainable tourism which creates jobs, promotes local culture and products.

Action

Offering professional training programs to faculty, staff, students, and the general public

TKU continuously strengthens sustainable development and AI innovation competency-related training and learning for faculty and staff. We have established a Microsoft certification testing center recognized by the global industry. Leveraging various software and hardware technologies, we empower teachers, students, alumni, and even alumni-owned businesses with AI and cloud applications, enhancing their professional development and competitiveness in the job market. We have established the College of AI Innovation and integrated over 200 world-class Microsoft courses, covering five major areas, including artificial intelligence, the Internet of Things, big data, cloud computing, and innovation and entrepreneurship. This approach helps students develop digital competencies that better align with future career needs. TKU has also initiated industry-academia collaborations with businesses, focusing on seed teacher training, seed student leader training, and guidance for obtaining AI certifications. Once the certification testing center is open, we plan to offer 26 international AI certification exams to pro-

vide the convenience of on-site testing.

Assisting individuals with disabilities in their education and employment

Tamkang university, as one of the few schools in Taiwan that have pioneered admission for visually impaired students, has established the only resource center for the visually impaired in Taiwan. Over time, our services have expanded to include individuals with various disabilities. Our services encompass assistance and guidance in both daily life and employment and education. We aim to empower individuals with disabilities to overcome inherent disadvantages and enhance their employability. In 2003, we were entrusted by the Ministry of Education to operate the College and High School Assistive Technology Centers for the Visually Impaired and Braille Book Services. We also established the Chinese Visual Impairment Library to provide comprehensive library



and information services to the visually impaired. In 2009, we partnered with Chunghwa Telecom to establish the nation's first Visual Impairment Customer Service Center. This center, aimed at promoting employment opportunities for the visually impaired, offers training in visual impairment information literacy skills, including professional training in areas such as programming, accessible internet, and database management. We also provide specialized training in computer skills for individuals with low vision, as well as job placement and vocational counseling for the visually impaired.

Promoting regional revitalization and creating employment opportunities through USR projects

1. Smart Jaunt of Tamsui-Kavalan—The Trip of Exploring Life Aesthetics

Tamkang university's USR project, “Smart Jaunt of Tamsui-Kavalan” is built upon the activities of exploring life aesthetics. It combines the essential features of cities along the Tamsui-Kavalan Trail to develop various user-friendly and accessible activities of exploring aesthetics for each city. The main objective of this project is to use A3 (AR, AI, APP) technology to vividly present the rich history and culture of the Tamsui-Kavalan Ancient Trail, and accordingly connect the culture from the land to the ocean in Yilan, incorporating technological elements to revitalize local characteristics and lifestyles. Through emerging self-media marketing methods on

YouTube, the project seeks to attract a broader audience and young tourists, to explore the Tamsui-Kavalan Ancient Trail region. This project involves taking students to various locations for aesthetic exploration and cultural research, fostering brainstorming through hands-on experiences, and producing creative aesthetic guidebooks and YouTube video scripts. The Lanyang Museum has professional exhibition space, experts in cultural and historical data, as well as administrative personnel for exhibitions, making it an ideal hub for presenting the Tamsui-Kavalan Ancient Trail. The long-term collaborative direction of Lanyang Museum involves project teams comprised of faculty and students who conduct on-site visits to collect data related to the Tamsui-Kavalan Ancient Trail. They collaborate with professionals to compile this information and ultimately create AR/VR content to offer visitors a rich experience within the museum. Additionally, they incorporate the concepts of game design, using interactive devices (such as smart interactive robots), to make learning about culture and history enjoyable, thereby enhancing interest in learning.

Su'ao Township is one of the representatives of Yilan's maritime culture, and it is currently actively promoting marine education, sustainable development, and regional revitalization. In the long-term collaboration with Su'ao Township Government, the goal is to assist in planning future urban development and implementing IoT and AI solutions to enhance the quality of life. The approach involves project teams composed of faculty and students who seek to understand the local needs of Su'ao and engage in discussions with civil servants of the municipal government. This not only deepens their understanding of the

area's characteristics but also, through the practical implementation of smart systems, provides professional services to fulfill social responsibilities.

2. Agriculture Literacy Education - Non-toxic, Organic Tamsui Impression—CampuSA : Industry and Population support of place-making

Tamkang University's “Agriculture Literacy Education - Non-toxic, Organic Tamsui Impression” project, starting from the professional competence service learning course at the University, leads students to engage in three major dimensions: understanding agriculture, experiencing farming, and initiating farming. They deeply immerse themselves in the community, jointly practicing sustainability. This collaborative learning and co-creation movement between the university and the community allows students to gain a deeper learning experience by getting close to the real world and experiencing the satisfaction of making

a tangible impact. As seeds of change, students propose innovative ideas, participate in activities such as setting up markets and herb gardens, engage in agricultural experiences, create documentary videos, and even collaborate with design experts to repackage agricultural products and strategize marketing channels for small farmers. Through crowdfunding platforms and other initiatives, they collectively cultivate the image of a non-toxic and organic Tamsui. This initiative leads the most significant stakeholders in the greater Tamsui area – the students – to enhance their understanding of and emotional connection to the area. It guides students to “help discover local needs and solve problems,” while simultaneously promoting more Tamkang students to establish roots in the greater Tamsui area and supporting industrial development. Starting from the dining table, it conveys the stories and cultures embedded in food and creates a population for local revitalization. This spirit aligns perfectly with the United Nations SDGs.





INDUSTRY, INNOVATION, AND INFRASTRUCTURE



Target

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

Action

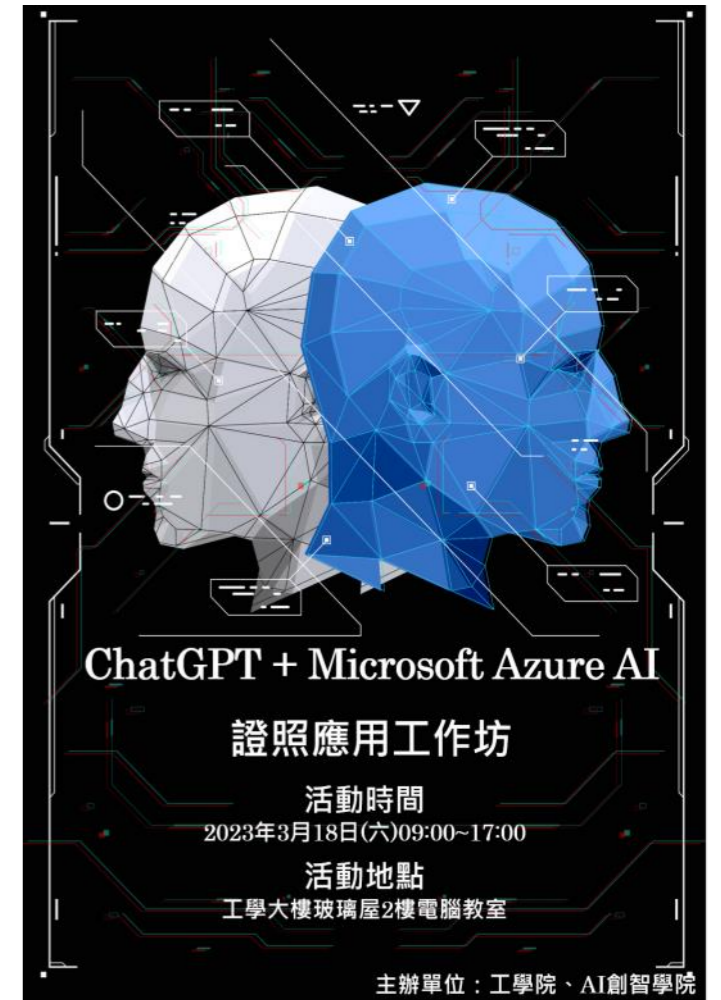
AI+SDGs=∞

The principal of Tamkang University revealed at the 110th Academic Year Teaching Administration Innovation Seminar on October 30, 2021, that the school officially adopted “AI+SDGs=∞” as the focus of school development in 2021. In the future, we will use “SDGs” as the core concept, integrating local, international, intelligent, and future elements, while using “AI technology and cloud services” as innovative strategic tools to achieve the vision of “Co-creating Greater Tamsui, Intelligent Greater Future”.

According to the academic journal “Nature Communications”, a paper titled “The role of artificial intelligence in achieving the Sustainable Development Goals” that has been cited more than a hundred times, AI can promote the realization of 134 detailed goals of SDGs and may also inhibit 59 subdivided goals. The proportion of positive impacts is 79%, and the negative impact is 35%. The conclusion is that AI has a quite positive impact on achieving SDGs goals.

With the same belief, our school believes that using AI big data, the Internet, and cloud technology as the foundation can add value and accelerate the implementation of the United Nations Sustainable Development Goals (SDGs).

Tamkang University cooperates with Microsoft to develop a full-cloud campus, fully promoting Smart PDCA (Paperless, Digital, Collaborative, Automatic and intelligent), effectively streamlining administrative processes and time



costs; digitizing courses, teaching online in real-time or asynchronously, so that learning continues even when classes are suspended during the pandemic; creating an AI application reality field within the school, setting up a Microsoft certification examination room recognized by the global industry, empowering teachers, students, alumni, and even alumni companies, to multiply their professional development and employment competitiveness.

Our school has established the College of Artificial Innovative Intelligence, introducing more than 200 world-class course resources from Microsoft, covering “Artificial Intelligence, Internet of Things, Big Data, Cloud Computing, Innovation and Entrepreneurship” and other five major fields, to build digital capabilities that better meet future career needs for students. The AI Innovation Academy has successively cooperated with

enterprises such as Winbond Semiconductors, Federal Bank, and Hongsheng Group for industry-academia cooperation. It also conducts teacher seed teacher training, student leader seed training, and guidance to obtain AI certification. It is expected that after the certification examination center is launched, it will provide 26 AI international certification exams to practice the convenience of local exams.

On June 7, 2022, we signed an MOU with Far EasTone Telecommunications for a “5G Metaverse Zero Carbon Campus”. Based on the cooperation with Taiwan Microsoft for a “Full Cloud Smart Campus”, we continue to promote digital transformation; at the same time, we established the Center for Sustainable Development and Social Innovation, under which there are three groups: “Zero Carbon Emissions”, “Social Practice”, and “Resilient Governance”, actively pro-

moting the United Nations Sustainable Development Goals throughout the school.

Starting from 2022, we offer AI and Sustainable “Double Tower Feature” courses, with “AI and Programming Language” and “Exploring Sustainability” each worth 1 credit, included in the compulsory courses for freshmen, to help students understand sustainable development and respond to future development through learning AI. Under the concept of “sustainable governance”, with the Center for Sustainable Development and Social Innovation as the hub, we cooperate with all colleges of the school to cultivate the school's “sustainability” education as a standard, offer “Exploring Sustainability” courses, guide students through the process of social awareness, social participation, and social innovation, enrich the two core qualities of “exploration” and

“sustainability”, and hope to cultivate sustainable citizens for the future in university education. At the same time, we offer school-wide AI technology and cloud service courses to promote the innovative transformation of all teachers and students in the school and accelerate the value-added practice of SDGs.





REDUCED INEQUALITIES

Target

10.3 Ensure equal opportunity and reduce inequalities of outcome, including through eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and actions in this regard.

Action

The Visual Impairment Resource Center

Tamkang University is one of the few in Taiwan that admits visually impaired students and has established the only visual impairment resource center in the country. The service has expanded to include people with various disabilities, providing assistance and guidance in life and employment, helping them overcome their inherent disadvantages and enhance their employability. In 2003, commissioned by the Ministry of Education, we operated a visual aid center and braille book business for colleges and high schools, and established a

Chinese braille library, providing comprehensive book information services for the visually impaired. In 2009, in cooperation with Chunghwa Telecom, we established the first visually impaired customer service center in the country, promoting employment opportunities for the visually impaired.

Study Assistance Program

Our school offers various study assistance and tuition fee reduction programs, helping families of military, public, and educational personnel, indigenous people, low-income households, middle and low-income households, students with disabilities, children of people with disabilities, children of active military personnel, or children from special circumstances families to study with peace of mind. The school also offers more than 20 scholarships, including scholarships for students with disabilities and friendship scholarships. Each

department and office offers work-study opportunities, which are prioritized for students from economically disadvantaged families.

Providing Open Educational Resources and Lifelong Learning Opportunities

Our school offers a large number of physical and online courses for the public to participate in for free or for a fee. We open library resources for use by people outside the school and hold many lectures and seminars, providing lifelong learning opportunities for people outside the school.

Providing Vocational Training Courses to Overcoming Economic Disadvantages

Our school, in cooperation with the Ministry



of Labor's Industry New Vanguard Subsidy Program, offers Python, AI employment practical classes, and international enterprise digital marketing talent training classes, serving unemployed youth. Through cultivating workplace skills, we enhance their employability.

Promoting Gender Equality Education

Our school, in order to promote substantive equality of gender status, eliminate gender discrimination, protect human dignity, and cultivate and establish gender-equal education resources and environment, has established a Gender Equality Education Committee in accordance with the "Gender Equality Education Act" and the school's "Organizational Regulations Article 20".

Youth and Elderly Learning Together Project and After-school Accompaniment Project

Our school's USR project team and student volunteer clubs, based in neighborhood offices or community organizations, construct a companion mechanism serving the elderly and children in the community, providing long-term care services and after-school care and remedial teaching for children, supporting community life creation.

Cambodia ECC Partner Program

Every winter and summer vacation, our school's economics department teachers train student teams to go to Cambodia to cooperate with

the local NGO ECC school for international education work, including English teaching, computer teaching, environmental health education, and cultural investigation work. The village where the ECC school is located is near the World Heritage Site Angkor Wat and is a poor village. The local children generally hope to become well-paid tour guides in the future. Therefore, they need English and computer skills to develop the tourism industry. The teacher-student team, through their service work in the area, noticed serious environmental health problems and included environmental health education as a necessary course, leading elementary school students to improve local people's hygiene awareness through river cleaning work. Even during the pandemic, the work continues to be promoted, from physical to online methods, and from single-point dialogues to more professional connections and discussions.





SUSTAINABLE CITIES AND COMMUNITIES



Target

11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.

Action

Good Life in Tamsui: Learning-Oriented Plan for Urban and Rural Construction

Both of the “Living Sphere Construction Plan in 2018-2019” and the “Learning-Oriented Plan for Urban and Rural Construction in 2020-2022” are parts of the USR project “Good Life in Tamsui”. The project brought students into fields through course design, and promoted various kinds of life experiments with the participation of the invited communities. We explored the possibility of a new way of life in the face of the driving force of urban development and transformation.

Our main works include the practical models of the three fields, which are “international connection”, “environmental improvement” and “living laboratory”. Also, two cumulative mechanisms for teaching research, “professional think tank” and “teaching platform”, are carried out.

We made this action into “task-based learning”. Focusing on learning, we explored the possibility of cities as knowledge production fields, and found problems and sought for solutions, so that we can give feedbacks based on our experiences and actions to the society.

In response to the objectives of the University’s “School Development Plan from 2023~2027”, the five-year experiences are consolidated for the purpose of building “a sustainable cloud university city”. We created ten paths for “Local Learning” and proposed ten action plans as the social tasks as well as positive goals to which the Uni-

versity has been being dedicated after five years since the USR project started.

Through social participation, we will continue to improve Tamkang University’s professional knowledge, service and social responsibility. Linking these actions to Tamkang University and the fields in Tamsui, we hope this can be utilized to strengthen and push forward the area transformation in Tamsui.

The ten action projects are listed below:

1. The Great Tamsui Teaching Resource Sharing Platform
2. Environmental Education Base and Tamsui Ecological Network Construction Plan
3. SDGs Taipei-Tamsui Environmental Issues Initiative Alliance
4. Local Learning and Valley Course



5. Supporting Communities' Living Sphere Construction
6. "The Great Tamsui Records" Documentary
7. Managing a City Cultural Visiting Veranda
8. Outdoor Workshop: The North Coast Regional Revitalization College
9. International Connections and Asian Urban Governance Experience and Empowerment Program for Foreign Students
10. "Learning in University" Self-Directed Learning Course

In the past two decades, the population in Tamsui increased from 90,000 to 190,000. The new redevelopment zones (Shalun, Xinchun Street, and Beixin Road) and Xinshizhen (The New Town) not only expanded the scope of the town but renovated the urban aspect of Tamsui.

On the other hand, with the booming tourism industry, the historical districts confront the situation of population migration and insufficient living facilities.

We persist in organizing forums with local authorities and organizations so that we can draw the outline for the future of Tamsui to build up a livable city for tourists and the local residents. These ten learning paths will be dedicated to connecting and weaving new ecosystem relationships between the people and the land.

The main achievements and highlights in 2022 include:

1. March 2022—Results Exhibition | USRxCSR Tamkang's Creation of Practical Knowledge

USRxCSR combines alumni enterprises and the school's professional practice with the com-

mon goal of fulfilling social responsibilities. This year's Spring Feast is specially organized around the theme of "Tamkang's Creation of Practical Knowledge," incorporating various activities such as social gatherings, exhibitions, and academic seminars. Its aim is to encourage alumni enterprises and the university to collaborate and present an exhibition showcasing the results of our university's students, faculty, and alumni in practicing social responsibility. We hope to convey the enduring spirit of our university's sustainability through the knowledge and action of learning, as well as the knowledge and action of our school.

2. May 2022—Seminar | Seminar on Practical Experiences in Visiting Local Culture in Tamsui

This seminar began with the sharing of achievements from the USR project and invited long-term local partners to participate in the ex-

change and discussion of cultural visiting experiences. During the conference, we invited Professor Chih-Hung Wang from the Institute of Architecture and Urban Studies at National Taiwan University to deliver a special lecture titled "Guidance as a Method." We also presented three USR project outcomes based on self-guided exploration of objects, including "Reality Puzzle Exploration Book," "Historical Picture Book," and "Living Human Library of Street Corner Museums." In the afternoon session, the main focus was on "Guided Tour," with in-depth discussions on experiences related to local history, venue facilities, and neighborhood revitalization.

3. June 2022—Comprehensive Records of greater Tamsui | A Decade of Achievements

The "Comprehensive Records of greater Tamsui" project, which began in 2012, has now entered its tenth year. Combining the courses



“Film and TV Project Planning” and “Film and TV Project Production,” students are led to actively document the community, systematically preserving the beautiful stories of the culture, history, industries, society, and education of the greater Tamsui area. This project has completed various themed documentaries, such as “Biography Chronicles,” “Commodity Chronicles,” “Local Culture Chronicles,” “Unofficial Historical Chronicles,” “Shining Chronicles,” “New Immigrant Chronicles,” “Community Chronicles,” “Distinguished Educators Chronicles,” “Environmental Chronicles,” and “Elderly Chronicles.” These documentaries are archived in the “Tamshui Wiki Library” and have contributed to the human experiences that have emerged from the common people and the land in the Tamsui region.

4. August 2022—Field School | Establishment of a Five-Year Curriculum Module

In our USR Project in 2018, we introduced the “Field School Workshop for Potential World Heritage Sites,” which offers courses focused on the historical areas of Tamsui and encourages students from various disciplines to participate and involves cross-disciplinary guidance from faculty members from the Department of Architecture, the Graduate Institute of Curriculum and Instruction, and Educational Design Department). The courses propose theme-based urban conservation action plans, seek resources, and implement proposals to accumulate experience in “Community Design” and the creation of “Living Heritage”.

5. August 2022—International Linkage Seminar | Laying the Foundation for International Service Work in Local Resilience and Flexibility

This seminar focuses on the difficulties and challenges faced by international linkage work after the pandemic, serving as a reference for the medium and long-term planning of universities in the post-pandemic era. USR teams from four universities, namely Nanhua University, Kaohsiung Medical University, Chung Yuan Christian University, and Tamkang University, share their practices and achievements in local and international service work and discuss practical experiences related to the difficulties and challenges in the post-pandemic era.

6. September 2022—Community Companionship | Presentation of Achievements in the Construction of the Characteristic Yanzih Community in Zhengde Village

Continuing the core concept and goals of the “Swallow Trail” in 2019, we lead residents to expand their knowledge of the open spaces around the community. We engage in community identity building and construction activities within a friendly environment, hoping to involve Zhengde Village residents in environmental recognition, and discussions on space friendliness and public nature. In order to achieve the goal of community identity, we specially organized the “Swallow Game Lane” mural painting workshop, inviting elderly community residents and children to get to know the swallow residents of Zhengde Village together.





RESPONSIBLE CONSUMPTION AND PRODUCTION



Target

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

Action

Sustainable consumption

To promote responsible consumption, the university has formulated policies such as “source reduction,” “green procurement,” “resource recycling” and “hazard prevention.” The food supplied by catering manufacturers is required to comply with relevant safety and hygiene regulations. Local ingredients are given priority, and genetically modified ingredients are prohibited; The university purchases a variety of products with the environmental protection label. In 2021, the money spent on the procurement of green products with the environmental protection label amounted to NT\$7.98 million. The university was also awarded the “Green Procurement Award” by the New Taipei City Government for seven consecutive years from 2015 to 2022.

Reduce waste generation

The university sets up an Environmental Protection and Safety and Health Center to strictly manage and properly dispose of the hazardous wastes produced by teaching experiments. The center follows regulations and combines the ISO45001 occupational safety and health standards to ensure personnel health and environmental safety. The whole school implements the classification of garbage; the restaurant strictly implements the classification and recycling of kitchen waste, and no garbage is sent to the landfill. The store does not provide plastic bags and disposable straws. The restaurant uses high-temperature cleaning for reusable tableware, promotes low-carbon lunch boxes, and provides discounts for bringing your own environmentally friendly tableware. Orders from catering manufacturers must be

logged on the campus food ingredients registration platform for inspection. Relevant policies shall be extended to supplier outsourcing services and supply chains.

Reducing the negative impact of urban development

In terms of reducing the negative impacts of urban development, especially urban waste, the University's Campus Planning Committee has decided not to construct any new buildings in the next five years (2021-2025) and to give priority to evaluating the durability of old buildings and reusing the space in an adaptive manner in order to reduce the environmental impact of the campus and avoid wasting building materials. We will also promote various measures to save electricity and energy, reduce water and waste, increase the pro-



portion of renewable energy, and reduce greenhouse gas emissions.

Practice of University Social Responsibility

“Agriculture Literacy Education - Non-toxic, Organic Tamsui Impression” project, operates with carbon reduction and creating a sustainable homeland as its core. Through the process of “knowing agriculture, developing agriculture, and creating agriculture,” we dive deep into the agricultural society and sort out the current state of local agriculture. In 2022, we continued to involve ourselves in the community and lead students to invest in local creation, from building micro markets to herb gardens, organizing agricultural experience activities, shooting documentaries, re-designing packaging for small agricultural products, creating marketing channels, cooperating with fundraising platforms, and supporting Industrial Development.

Researching energy to support sustainable development

The university continues to cooperate with the government, private enterprises or third sectors. Our cooperation includes assisting private enterprises in the treatment of industrial wastewater and jointly developing clean water technologies; The university was also commissioned by the Government’s Water Conservancy Department of the Ministry of Economic Affairs to develop a flood forecasting system; We also provide regular counseling for start-ups applying for low-carbon economies or technologies, assist entrants in applying for government projects, provide loans and venture capital fund-related information, and develop environmental software development and application plans; Courses are also provided to guide start-ups in fundraising and marketing, and match industry-university cooperation with teachers of our school. Teachers from the Department of Chemical Materials guided stu-

dents to participate in the 2019 “2nd College Green Chemistry Creative Competition” co-organized by the Bureau of Toxic and Chemical Substances, Environmental Protection Agency, Executive Yuan, and the Ministry of Education, with us winning the best work in the university category with the project “Electrospinning of Poly (Lactic acid) by Using Environmentally Friendly Solvents” and achieving good results among the 21 groups of junior colleges and universities in the country on November 19. The 12 Principles of Green Chemistry are guidelines for the development of environmentally sound products and processes and are widely valued by the chemical community. Submicron/nanofibers were prepared by combining methyl acetate (MAc) and dimethyl sulfoxide (DMSO) organic compounds with electrospinning technology, and MAc and DMSO were mixed into a 7:3 co-solvent to prepare 8wt% polymer solution for electrospinning to reduce harm to the environment.

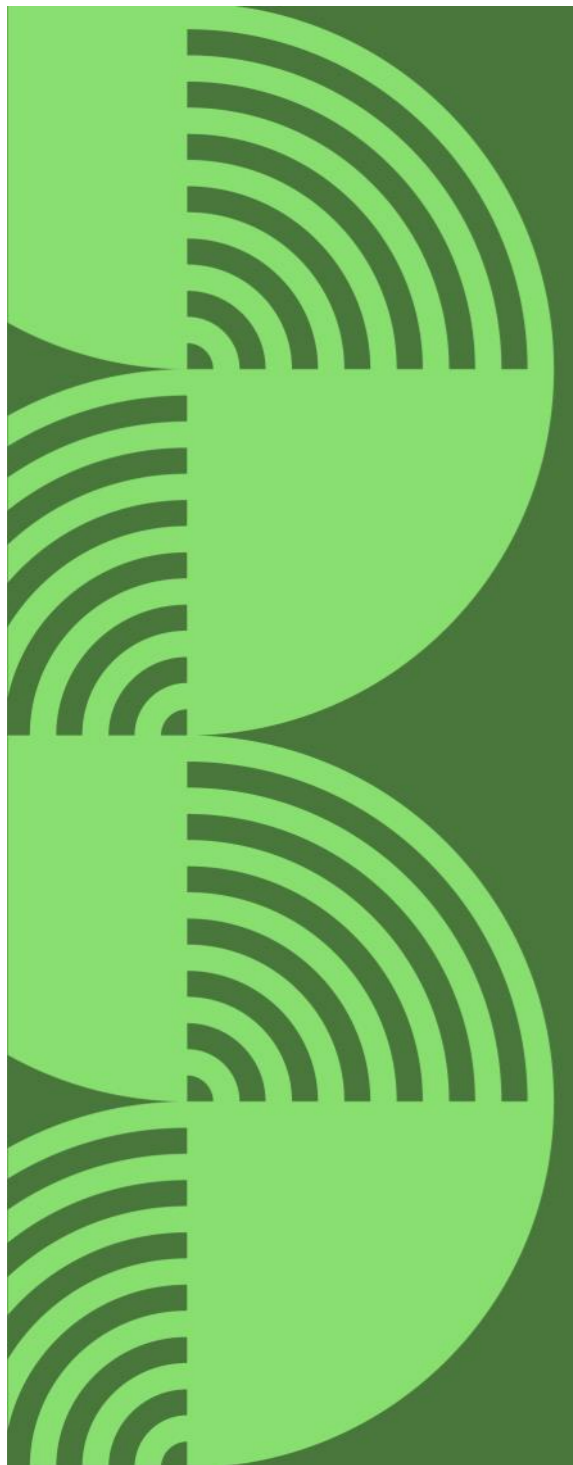
Commitment to Sustainability

To demonstrate its commitment to sustainability, Tamkang University released the “2020 Tamkang University Social Responsibility and Sustainability Report” in June 2021 to examine the implementation and effectiveness of its sustainability initiatives. The 2021 Sustainability Report was awarded the “Bronze Award” in the Taiwan Corporate Sustainability Awards, as well as the “Sustainability Performance Award - Social Inclusion Leadership Award” and two “Sustainability Goals and Actions Awards”. The report was analyzed on major issues and certified by a third party in accordance with the international standard GRI criteria, in order to make the report precise and specific, and to present our actions and determination to promote sustainability goals.





CLIMATE ACTION



Target

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

Action

Promoting Sustainable Environmental Education

The university provides global students with educational opportunities to learn good water management. It has a Department of Water Resources and Environmental Engineering, divided into Water Resources Engineering and Environmental Engineering groups, inspiring students to promote water resource protection and sustainable environmental development through engineering and science. In addition, to enhance students' awareness of major issues in global sustainable transformation, a “Sustainable Development” micro-course is specially set up, open to all students. The course content includes “Marine Technology”, “Human Rights and Social Jus-

“Environmental Ethics”, etc., laying the foundation for students' knowledge of sustainable development. Starting from 2022, AI and sustainability “double tower” courses are offered, with “AI and Programming Language” and “Exploring Sustainability” each accounting for one credit, included in the compulsory courses for freshmen, to help students understand sustainable development and respond to future development through learning AI.

To assist industries in understanding relevant laws and policies on sustainable development, formulate implementation measures, and cultivate sustainable management talents, the university's Office of Continuing Education cooperates with international certification centers and other institutions to develop a number of certification courses, including:

1. Three-stage series of courses for Sustainable Development Carbon Management Certification Analyst, Planner, and Manager
2. EU Sustainable Manager Training Course
3. Corporate ESG Sustainable Manager Certification Course

Research and Projects

The university has a Department of Water Resources and Environmental Engineering, and the school-level research center also has a Water Environment Information Research Center. The university's teachers serve as independent directors of Taiwan Water Corporation, assist the Environmental Protection Agency in promoting the Water Safety Plan, assist private enterprises in dealing with industrial wastewater, improve the water quality testing capabilities of water purification plants, and jointly develop clean water technology. They also serve as disaster prevention ad-



visory members of government departments and are commissioned by the Water Resources Agency of the Ministry of Economic Affairs to provide consultation on the maintenance and operation of reservoir flood control systems, assess the effective flood discharge capacity of reservoirs, reduce flood disasters caused by overflow, and reduce the loss of life and property caused by typhoon floods.

The university's Department of Water Resources and Environmental Engineering teachers led a team (Water Environment Information Research Center) to assist Yunlin County in setting up a "Smart City Flood Forecasting System", using IoT real-time monitoring data, combined with a time-series flood forecasting model, and then through actual rainfall events to verify and correct the model, to issue early warnings before the outbreak of water disasters.

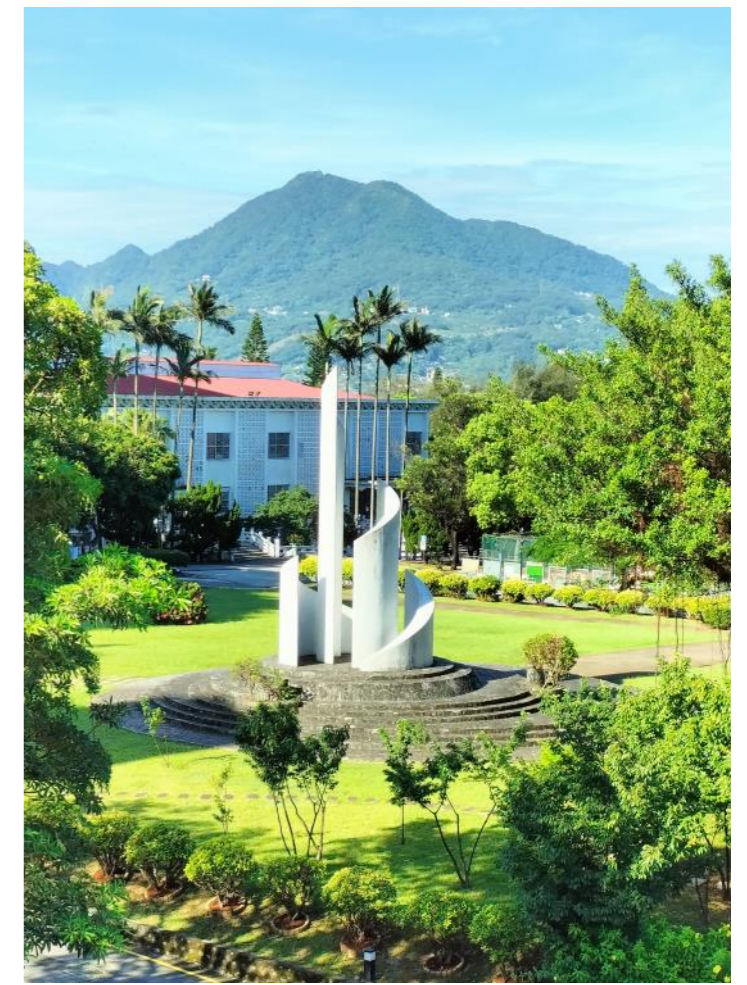
Raising Awareness of Sustainability

Starting in 2019, the university invites teachers and students from primary, secondary and high schools in the Beitam area and community care groups to jointly hold an annual "Environmental Issues" forum. The university seeks regional cooperation through these key sustainability issues, closely linking the university with the field, forming one or more communities, inviting different stakeholders and groups to participate, gradually forming local consciousness, and jointly promoting local changes.

Creating a Sustainable Campus

The university actively promotes energy conservation and carbon reduction based on the four

key points of "basic sustainable concepts of the school", "energy management and audit system", "energy conservation measures and performance", and "future energy conservation measures and goals". It has been recognized by the Ministry of Economic Affairs with the 2022 Annual Energy Conservation Benchmark Award. In terms of sustainable action strategies, the university has set short-term "positioning of the school for a sustainable campus", medium-term "becoming a base for practicing sustainable environmental education", and long-term "moving towards a green university with net zero carbon emissions" strategies, hoping that Tamkang can keep up with the times in sustainable development.





LIFE BELOW WATER



Target

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

Action

Waste Reduction at Source

Our school requires the welfare department (catering) vendors to limit the use of disposable tableware, not to provide plastic bags, disposable chopsticks, disposable spoons, and other products, as well as not to provide disposable plastic straws for dine-in, in order to reduce the use of plastic bags and plastic products. To encourage faculty and staff to bring their own utensils, the food court has an environmental grading price strategy for all types of meals sold: those who bring their own utensils enjoy a discount of NT\$ 3-5, followed by dine-in. If you do not bring your own utensils for take-out, you have to pay the highest cost.

Green Procurement

Implement pre-purchase assessment (prioritize replacing new purchases with idle items from other units), prioritize purchasing products with less environmental impact during procurement, including recyclable, low-pollution, resource-saving products, especially with the “environmental (energy-saving) label” as a prerequisite principle, encouraging the production of green products.

Resource Recycling

Comply with the relevant regulations of our country's Waste Cleaning Law, and implement various resource recycling measures according to the ISO14001 standard, including paper, iron and aluminum cans, PET bottles, waste batteries, toner cartridges, and kitchen waste. Resource recycling bins are set up on each floor and at outdoor garbage collection points. The general garbage col-

lected is transported to the garbage collection point for compression treatment, and the resource garbage is classified and placed, and after treatment, sent to the garbage incineration plant and resource recycling plant respectively.

Waste Management

The main business waste of our school is general business waste, which is classified, stored, and cleared according to the school's waste management and resource recycling procedure manual; some are hazardous business waste, which comes from the biological medical waste of the school's health care group, and a business waste cleaning plan is made, and it is handled according to government regulations.

The recovery and transportation of laboratory waste liquid in our school is handled in accordance with Article 28 of the Waste Cleaning Law. It is entrusted to a transportation company ap-



proved by the central competent authority (National Cheng Kung University Environmental Resource Research Management Center Resource Recycling Plant) for transportation and treatment. It is transported 1-2 times a year, and the waste transportation form records are retained for inspection to ensure that the production, storage, and cleaning of laboratory waste in the campus are all handled in accordance with our country's environmental protection, industrial safety, transportation, and other relevant regulations.

Sewage Management

In order to achieve the goal of not polluting the river water quality, the sewage of the Tamsui campus is fully included in the New Taipei City public sewage pipeline, and it is concentrated to the government-established Tamsui Sewage Treatment Plant for treatment. Our school bears

the cost of sewage treatment, and the sewage is treated to meet the national discharge standards before being discharged through the treatment plant's equipment.

Beach Cleaning Activities

Multiple beach cleaning activities are held every year, leading teachers and students to clean the beaches near Tamsui, promoting ecological environment maintenance education, and supporting ecological sustainability with actions.

Advocacy Alliance

Starting from 2019, our school invites teachers and students from primary, secondary and high schools in the Beitam area and community care groups to jointly hold the annual "Environmental Issues" forum. The 2019 Climate Action, 2020 Marine Waste Action and 2021 Water Resources

Issue, and the 2022 participation in the coastal tree planting event organized by the Rotary Club, seeking the possibility of regional cooperation. Through these key sustainability issues, the university is closely connected with the field, forming one or several communities, inviting different stakeholders and groups to participate, gradually forming local consciousness, and jointly promoting local changes.





LIFE ON LAND

Target

15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.

Action

Promoting Sustainable Agriculture

The USR project “Agriculture Literacy Education - Non-toxic, Organic Tamsui Impression Project” is implemented from three major axes: knowing agriculture, experiencing agriculture, and creating agriculture. From the construction of herb gardens, agricultural experiences, documentary shooting, and even combining design energy, it repackages and rethinks marketing channels for local small farmers' high-quality products, holds mar-

kets, promotes characteristic agricultural creative products, and cooperates with fundraising platforms to jointly support non-toxic, organic sustainable agriculture.

The related activities in 2022 include:

Tea Culture Sensory Experience Course at Yiliang Tea House: To help local revitalization in remote areas, and to let the visually impaired community recognize the Tamsui area of the North Coast, a tea culture experience course was held at Yiliang Tea House in Shimen District, Tamsui by the School's Visual Impairment Resource Center and the “Agriculture Literacy Education” USR project team. The course was led by Yiliang Xie from Yiliang Tea House, leading teachers and students from the Visual Impairment Resource Center to visit the tea factory, experiencing tea leaf picking, and understand the skills of roasting tea and the tea-making process.

North Coast Food Impression Culture Series: The series includes ten events, each time inviting different farmers from the Tamsui area to share, allowing participants to increase their appreciation of these unique farming cultures and jointly promote sustainable agriculture.

Aquaponics System

The Business and Management College's Research Center for Circular Economy and Green Finance actively applies the educational and research value of the aquaponics system. The aquaponics system combines the excreta of aquatic animals and organic matter in the water, decomposes and filters them into nitrates that plants can absorb, and supplies them to the vegetables on the breeding tank; at the same time, the root system of the vegetables can purify the water for use by aquatic animals. The school's departmental alumni association donated to sponsor the school to set up an aquaponics system. It is expected to set up mul-



tiple points in the Tamsui campus and combine it with courses to promote the concept and practice of the circular economy and promote environmental sustainability.

Sustainable Development Micro-Course

To continuously promote environmental sustainability, our school has set up a “Sustainable Development Micro-Course”, spanning humanities, social, and technological fields. Courses such as “Environmental Ethics”, “Forest Ecology and Tree Protection”, “Ecological Community Construction”, and “Marine Technology” are offered to enhance students' awareness of major global sustainable transformation issues and establish students' awareness and literacy of sustainable development.

Coastal Wetland Ecological Restoration

The USR project “Tamsui Good Life” responded to the tree planting event held by the Rotary Club in the green space of the coastal dike park in Tamhai New Town. Through the protection of seedlings, a multi-layered green space in Tamhai was created, connecting the ecological green corridor of the Linzih River waterfront and the coast. Through this restoration action, it is hoped that this land can soon become a forest, providing a habitat for organisms to survive, and compensating for the coastal wetland ecological environment sacrificed by land reclamation.





PEACE, JUSTICE AND STRONG INSTITUTIONS

Target

16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.

Action

World Citizenship Education Curriculum

Our College of Education undertakes numerous collaborative projects, spanning both public and private sectors, such as “Learning Community under Learning Leadership”, “World Citizenship Education Workshop”, “Workshop for Economically Disadvantaged”, and “iEARN International Professional Education Skills Workshop”. We have long-term cooperation with the New Taipei City Government and other local schools, implementing new curriculum guidelines and conducting teaching seminars. Among them, teachers from the Department of Education and Futures Design have been collaborating with Oxfam Hong Kong to implement the World Citizenship Education Curriculum at several primary and secondary schools in New Taipei City.

Through case teaching, issue teaching, innovative teaching and other courses and simulation exercises, we guide primary and secondary school students to understand the operation of social systems, participate in public affairs discussions, and thereby cultivate students' abilities to analyze, express opinions, and make decisions.

Related activities in 2022 include:

Fast Fashion Public Class Discussion: This activity explored issues related to fast fashion. It aims to raise awareness about the impacts of fast fashion on our society and environment and discuss possible solutions and alternatives.

Shimen Junior High School Civic Action Course Achievement Presentation: This event focused on discussing indigenous issues. Shimen

Junior High School students present their research findings and the results of their civic action projects related to indigenous peoples.

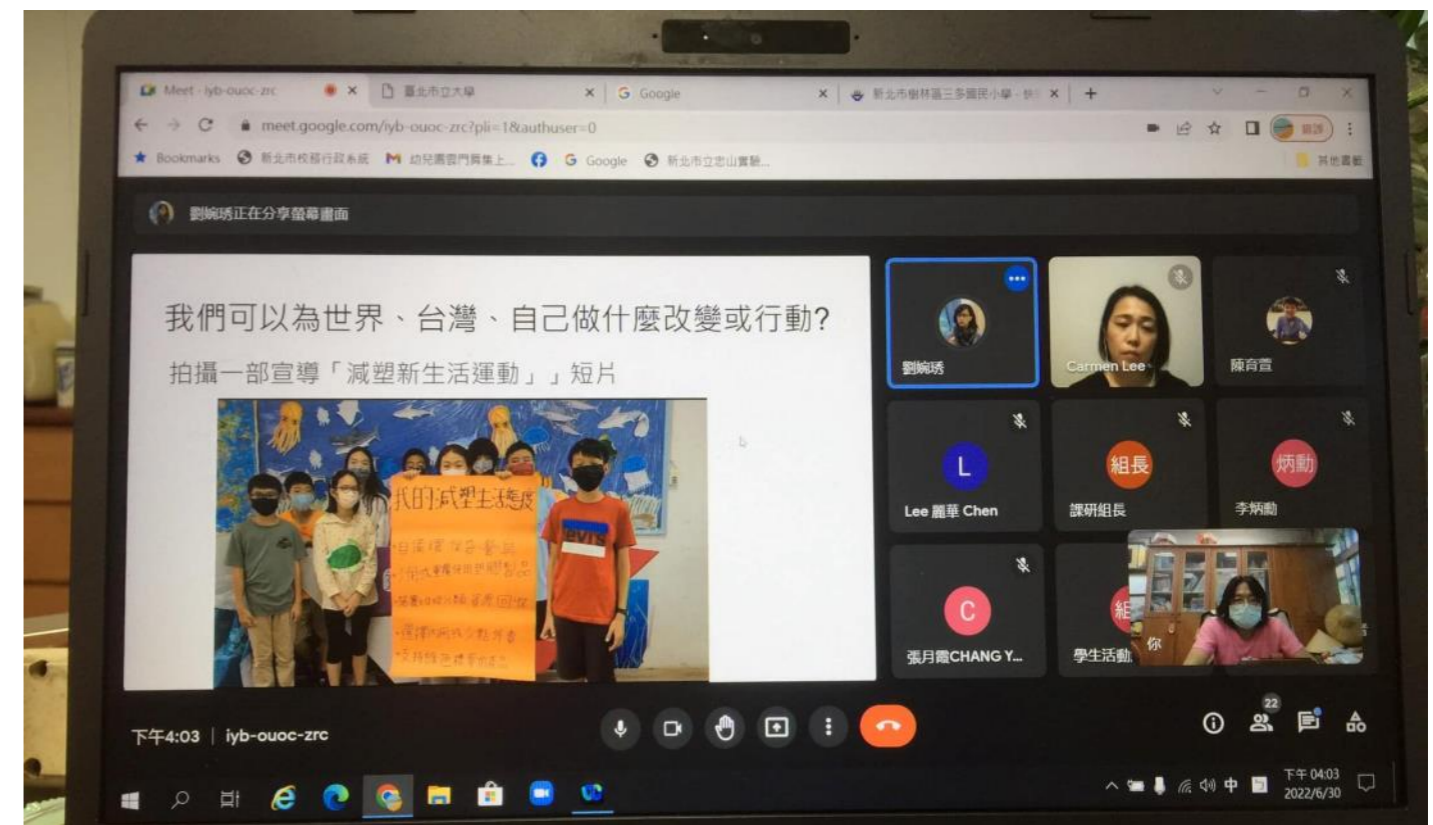
Xinxing Elementary School Civic Action Course Achievement Presentation: This event delved into topics such as extreme climate conditions and the plight of vulnerable groups during the pandemic. Xinxing Elementary School students present their research findings and the results of their civic action projects related to these issues. This activity not only showcases the students' understanding and efforts but also raises awareness and promotes discussions on these pressing global issues.

Sacred Heart Elementary School Achievement Presentation: This event explored the topic of economic activities during the pandemic. The



students of Sacred Heart Elementary School shared their insights on how the pandemic has affected economic activities and discussed potential solutions or strategies to mitigate these impacts.

Zhongshan Experimental Elementary School and Xingren Elementary School Joint Civic Course Achievement Presentation: This joint event showcased the results of the civic action courses from both schools. The students present their research findings and the results of their projects on various social, environmental, and cultural issues. This collaborative event aims to foster a sense of community and shared learning among the students, while also promoting civic engagement and social responsibility.





PARTNERSHIPS FOR THE GOALS



17.17 Encourage and promote effective public, public-private, and civil society partnerships, building on the experience and resourcing strategies of partnerships.



Actively establishing diverse partnerships to promote sustainable development goals

1. “5+2” Industry-Academia Alliance Agreement

In May 2022, Tamkang University has collaborated with 12 institutions to sign a “5+2” Industry-Academia Alliance Agreement to jointly promote digital transformation and sustainability.

Tamkang University, together with the Pingjhen Industrial Park Service Center of Industrial Bureau, Ministry of Economic Affairs, Jia Wei & Co, CPAs, the Information Service Industry Association of R.O.C., Excellence Opto. Inc., SGS Taiwan Ltd., and 12 other enterprises and gov-

ernment units, have jointly signed an “5+2 Industrial-Academic Collaboration Letter of Intent” in response to the government's innovative core values and sustainable economic development model. This is in alignment with the government's strategies of “Connecting to the Future,” “Connecting Globally,” “Connecting Locally,” and the “5+2” Industrial Innovation Project. We invited representatives from the enterprises in “5+2” industries to sign this letter of intent, in line with the government's policy initiatives. In the future, we will assist the signing companies in accelerating industry transformation and upgrading.

The academic lecture at the conference was delivered by Assistant Professor Shu-Han Hsu from economics department at our university. The topic is “Can cryptocurrencies be safe-haven assets for currencies during market crises?” The practical lectures were given by Dean Tzung-Hang Lee of the Colleges of Engineering and AI Intelligence, Dean I-Cheng Chen of Physical Education, and Professor Li-Chuan Chen, Director of the Center for European Union Studies. They

shared their experiences on “The Application of AI + Digital Learning in Industry Transformation and Innovation,” “Research on Feasible Strategies for Promoting Local Revitalization - A Case Study of Kayaking in the Tamsui River,” and “Sustainable Industries Moving towards the International Arena.”

In terms of academic paper presentations and industry-academic exchange discussions, Professor Sue-Huai Gau from our Water Resources and Environmental Engineering Department, Director Li-Chuan Chen of the European Union Center, and Professor Hsuan Chang from the Chemical and Materials Engineering Department presented on the topics of “Corporate Sustainable Development,” “Green Supply Chain Law,” and “Process Energy Efficiency and Carbon Reduction,” respectively, to discuss their technical achievements in the field of sustainable development. The “2050 Net Zero Carbon Emissions Lecture” was delivered by Chin-Ming Huang, the Section Head of the Office of Energy and Carbon Reduction, Executive Yuan, who shared more information about



the net-zero carbon emissions in Taiwan.

2. MOU with Far EasTone Telecommunications

In June 2022, TKU has signed an MOU with Far EasTone Telecommunications to jointly create the “5G Metaverse Zero Carbon Emissions Campus.” This marks the first-ever industry-academic collaboration between a telecommunications company and a higher education institution in Taiwan, focusing on two key issues: the metaverse and zero carbon emissions. The goal of the “5G Metaverse Zero Carbon Emissions Campus” MOU is to transform Tamkang University into a sustainable and low-carbon campus. Tamkang University's strategic direction for its institutional development is “AI + SDGs = ∞,” integrating SDGs and global citizenship awareness into teaching, research, and institutional development. The primary focus of the institutional development project includes two major initiatives: “Dual-

Track Transformation” with a foundational emphasis on “digital transformation” and “Sustainable Development,” which leverages smart technology to accelerate value-added goals. In the future, the university will continue to enhance campus environments, educational content, and operational efficiency, steadfastly advancing towards the commitment of achieving net-zero carbon emissions by 2050.

Participation in conferences to exert sustainable influence

June 2022

In June 2022, TKU participated in the exhibition of “2022 ESG Summit: Environment, Social, Governance”, where we exchanged sustainable development practices and achievements with benchmark companies and academic institutions in the fields of sustainable development, social responsibility, and corporate governance in Tai-



wan. Our university's exhibition themes included:

University Social Responsibility - Building the Tamkang University City in Tamsui: Utilizing the Taipei Metropolitan Area (including Taipei City, New Taipei City, and Yilan County) as a practical field, investing in practical efforts in areas such as social care, culture, education, and industry.

Learning Analytics System: Establishing a “Learning Analytics System” to track students' digital learning activities, providing visual observation tools for instructors and mentors. This data is used for implementing adaptive teaching and guidance strategies to assist students in overcoming learning obstacles.

AI Cross-Disciplinary and Smart Placemaking: Demonstrating how AI Intelligence College of our university guides the interconnection of organizational resources, establishes cross-disciplinary cooperation channels, and develops interdisciplinary AI applications that integrate the humanities and technology.

July 2022

The International and Cross-Strait Affairs Office hosted the 2022 Online Summer Course “Sustainable Development - Taiwan and the World.” The program included a series of asynchronous courses and three synchronous online meetings on Microsoft Teams. Participants from more than 20 countries and 22 sister schools from around the world were invited to collectively learn about and explore Taiwan. The aim was for everyone to gain insights and deepen their understand-

ing of Taiwan. The course content covers various topics, including “Taiwan's Labor Market” by Professor Yen-Ling Lin, the Chair of the Economics Department, “Futures Studies in Taiwan” by Professor Jian-Bang Deng, the Head of the Education and Futures Design Department, “Semiconductor MEMS and Micro Drones” by Professor Lung-Jieh Yang from the Mechanical Engineering Department, “Taiwan's Roadmap to Net Zero Carbon Emissions” by Professor Chi-Wang Lee from the Water Resources and Environmental Engineering Department, “Chemistry in Daily Life” by Assistant Professor Min-Yeh Tsai from the Chemistry Department, “Enjoying Taiwanese Tea” by Associate Professor Yi-Feng Huang from the Public Administration Department, and “Geopolitics in Taiwan and the Asia-Pacific Region” by Professor Francisco Luis Perez from the Latin American Studies Institute. These courses provided insights into Taiwan's geographical location, economic development, and future prospects from economic, technological, and cultural perspectives. They also delved into the development of the semiconductor industry and address issues related to environmental sustainability.

Participation in SDGs policy development

More than 100 faculty members serve as advisors and members of government agencies, assisting the government in formulating or promoting policies related to sustainable development goals; more than 70 faculty members serve in non-governmental organizations to help promote sustainable development. Among them, teachers from the Department of Water and Sanitation serve as

independent directors of Taiwan Tap Water (Stock) Company affiliated to the Ministry of Economic Affairs, members of the “Taipei City Disaster Prevention and Rescue Expert Advisory Committee” of the Taipei City Government, and members of the “Techi Reservoir Watershed Management Committee” of the Ministry of Economic Affairs to promote the government's water resources-related sustainable development goals; teachers from the departments of civil Engineering, water Environment, transportation and management assist the Executive Yuan and local governments in reviewing engineering development and disaster prevention plans; teachers from the Department of Chinese and the School of Education assist the government in formulating and reviewing primary and secondary school education policies and work results; teachers from the European Institute serve as the government's advisory committee on EU issues and serve as an advisory member of the Institute of Industrial Relations; the Department of Economics assisted Cambodian NGO organizations ECC School in establishing a fish and vegetable symbiosis system; teachers from the Department of Chemistry assisted the government in the development of new anti-kidney cancer agents and biochemical treatment technologies.

SDGs Alliance Project

Since 2019, this project has focused on climate change as the main theme for the Local SDGs Alliance. In 2020, it addressed the issue of marine waste with coastal actions. In 2021, the project concentrated on the sustainable management of water resources, inviting various stakeholders and groups to participate to foster local

awareness and collectively drive local change. On March 19, 2022, in collaboration with the several Rotary Clubs in Greater Taipei Area, and Tamsui Agricultural Leisure Association, an afforestation event was held in Tamsui, New Town Coastal Embankment Park. Over 400 participants, including students and teachers from various schools in the Tamsui area and enthusiastic citizens, planted approximately 7,000 tree seedlings. The goal was to unite local efforts in creating a multi-layered green space in Tamsui, connecting the Linzi River Streambank and the coastal ecology corridor, restoring the coastal and watershed ecosystems.

Implementing SDGs education

Starting from 2022, AI and Sustainability “Featured Twin Tower” courses are launched. The courses “AI and Programming Language” and “Exploring Sustainability”, each worth 1 credit, are included in the compulsory courses for freshmen to help students understand sustainable development and learn AI. Under the concept of “sustainable governance”, the Center for Sustainable Development and Social Innovation serves as a hub to collaborate with all colleges in the school to cultivate the “sustainability” education of the school. The “Exploring Sustainability” course is offered to guide students through the process of social awareness, social participation, and social innovation, enriching the two core competencies of “exploration” and “sustainability”. At the same time, school-wide AI technology and cloud service courses are offered to promote the innovative transformation of teachers and students throughout the school and accelerate the implementation of SDGs.

Global Action Practice Program

The school promotes the “Global Service Internship Program” (GSIP) and the “Global Action Practice (GLAP)”. The former is a partnership between government departments and NGOs in Southeast Asia and Japan in which our counterparts designate the topics and students from our university carry out research in the form of international internships; the latter is to cooperate with the Community Development Association of Yilan County, new residents/migrant workers groups, literary and historical institutions, and primary schools in aboriginal areas to practice the university's social responsibility tasks and build local connections.





SDG1：消除貧窮

目標1.5

到西元2030年，提升貧窮與弱勢族群的韌性和災後復原能力，減少他們遭受極端氣候、經濟、社會和環境衝擊與災害。

淡江行動—專業知能服務團隊「經探號」

本校經濟系教授培訓學生，組成服務團隊「經探號」，每年寒暑假前往柬埔寨，與當地非營利組織 ECC school 攜手合作，進行國際教育工作，包含英語教學、電腦教學、環境衛生教育，以及當地文化踏查。「經探號」團隊

在每年寒暑假深入柬埔寨偏鄉做志工服務，至今已持續五年。這個取自驚嘆號諧音的團隊，就是希望能在世界各地創造許多令人驚豔的驚嘆號。

與 NGO 組織 ECC School 合作

ECC school 所在的村落緊臨著世界遺產吳哥窟，是一個貧困村落，當地兒童們普遍期盼未來能成為有豐厚收入的導遊，因此他們需要英文能力與電腦能力，藉以發展觀光事業。淡

江大學透過師生團隊將教育輸出到當地，短期目標是透過淡水經驗進行教育與引導，長期願景是協助在地村民建立自我學習能力。

2022 年，經濟系主任林彥伶帶領「經探號」團隊，於 8 月 7 日至 21 日前往柬埔寨擔任國際志工。因新冠疫情影響，此次是相隔 2 年半後再度前往，為柬埔寨暹粒省 PO 村貧困地區的國小與國中孩子們，進行課程內與課程後的教學，包括英文、電腦與中文。林彥伶深信，教育是改變未來命運的最佳方式，即使在沒有乾淨水源、沒有電、沒有網路的當地，孩童們對知識的渴望，都驅動著「經探號」志工們無怨無悔的付出。

與華碩電腦合作 提供再生電腦

柬埔寨是一個手機普及但幾乎跳過了電腦時代的國家。「經探號」團隊向華碩電腦申請相當數量的再生電腦，每次出發，都要靠團員們自己扛著一批批華碩所贊助的再生電腦帶到當地，協助當地發展電腦與科技教育，讓貧窮村落的孩子們透過網路與科技，看向更遠的世界。

8 月適逢柬埔寨雨季，貧窮的村落裡沒有

柏油和磁磚鋪設的地板，只有泥濘的街道，「經探號」成員每天一早都扛著十幾台電腦、踩著泥巴前往村裡孩童們聚集的中小學授課。相隔 2 年半再次進到村子，居民們竟然還認得「經探號」的制服，知道今年夏天又將帶來許多新的知識學習，不論大人小孩都瞪大眼睛引頸期盼，對「經探號」來說是非常榮譽也感動的一刻。

提升環境衛生及用水安全的教育

令志工們欣慰的是，到當地中小學的路上會經過暹粒河，河邊的居民們都會親切地打招呼，原來兩年前服務時，曾安排於課後時間帶領當地小學生一起進行淨川的工作。林彥伶在當時提供給地方一些建議，教導他們在兩岸架設魚網，攔下垃圾。居民指向河的遠方，林彥伶驚嘆：「從河川上望過去看到三、四道淨川網，說明了之前的苦口婆心，不只能立即改善他們的生存環境，教過的知識和方法，果然會在未來慢慢發酵。」藉由雙手，他們一步步改善生活環境，如今的河面上已不像兩年前充滿垃圾，而當地政府也在疫情期間開始整治河川，未來發生氾濫的機會也降低了，有益於當地的經濟發展。



此次除了延續過往所進行的英文與電腦教學項目之外，還舉辦了一場社區的衛教工作坊。由 ECC 負責人協助號召周邊五個村落的地方頭人與學生共同參與。工作坊以「潔淨的水」為主題，教導當地居民如何透過沉澱、過濾、煮沸等過程獲得安全的飲用水，過程最後也用這安全的飲用水泡上一杯來自臺灣石門的茶葉，供參加的居民們品嚐，成功結合衛教與文化交流。工作坊最後也教導居民們如何正確洗手，希望能透過「經探號」志工們一步步的帶領與指導，讓 PO 村的衛生與健康能獲得改善。

舉辦國際研討會直播 提升國際關注

另外，團隊將在當地服務期間所拍攝的紀錄片，透過舉辦國際研討會的方式，將在地的情況以第一手資料提供給線上會議的參與者，並在會議上分別就淡江大學本身以及中原大學、高雄醫學大學、南華大學的經驗，共同探討了河川與人之間、生態與人之間、環境與人之間、以及城市發展與人之間的關係。林彥伶

教授及其團隊希望這樣真實的呈現，能讓民眾看見不一樣的柬埔寨、也讓國人更加了解柬埔寨！同時，藉由到柬埔寨的服務，讓學生的視野能更加拓展成對世界的理解，也能體悟到身為經濟學家對世界的責任，並將知識和愛分享到世界上需要的地方，形成當地成長與改變的養份，真正發揮到淡江大學落實永續發展的目標的價值與意義。本校設有大量實體及線上課程，供民眾免費或付費參與，開放圖書館資源供校外人士使用，並且舉辦諸多講座、研討會，免費供社會人士參與，提供校外人士終身學習機會。



2 ZERO HUNGER



SDG2：消除飢餓

目標 2.4

2030年前，確保建立可永續發展的糧食生產系統，實施可增強生產力、具彈性的農作方式，協助維護生態系統，強化適應氣候變遷、極端氣候、乾旱、洪水與其他災害的能力，並逐步改善土地和土壤品質。

淡江行動—『農』情『食』課—無毒、有機印象淡水計畫

本校『農』情『食』課—無毒、有機印象淡水計畫，從環境關懷、糧作栽植、健康餐桌與惜食等面項著手執行，幫助在地發掘需求、解決問題。以知農、體農及創農三大主軸，連結多方產業，培養大眾對農育意識的關注、食農產業的認識，創造並搭起學校教育與社區及



在地食農的連結。從產地出發，串聯議題與活動，傳遞人與食物所承載的故事與文化。2022年相關活動包括：

石門鄉嵩山社區水梯田契作

本校經濟系與富邦人壽富康通訊處有感於三芝石門地區獨特水梯田農作經營方式，受到農業全球化及機械化的衝擊，發展逐漸困難，希望透過契作方式予以支持，遂於2021年分別與嵩山社區發展協會及芝青工作室簽約，用實際行動支持在地農業，更在時間許可下實際參與農作，讓學生們及公司成員更加了解在地農業文化。

開設食農教育微學分

結合地方青農及飲食業師，以「想要農業好必須吃的好」為核心主題，在2022年期間開設約十六堂課，課程內容涵概地方飲食、地方歷史、及地方產物特性，以實作與說明共進之方式，在業師與主持同學深入淺出的共同引導下，讓參與課程之教、職、員、生、社區人士增進食農教育知識。

深入地方田野調查

北海岸地區普遍存在人口外移問題。2022年初以內政部統計，石門區是全台前七名的社會增加率負值地區。管科系二年級同學，於暑假期間深入石門區，人口移出最明顯之山溪里嵩山社區及出磺口農場，進行田野調查。該社區在十多年前曾一度人口不及十餘戶，但在地方社造後成為臺灣有名的社造案例。學生多次拜訪地方人士及公部門，於10月時將其調查結果，並於11月時本計畫舉辦之北海岸七校農業聯合研討會中公佈。

與地方青農共同思索行銷企劃

與新北市政府農業局合作推動新北市農業創生，結合5% Design Action設計公司行銷專業，讓大學生能夠進入地方場域，發揮創意，與地方青農共同思索行銷新方向。來自公行系及全財管的同學，與石門區一良茶屋合作，推出以「門中找茶」為主題之茶文化創意行動，並於11月15日於三芝區牧蜂農場發表。



與地方青農共同思索行銷企劃

與淡水區樹興社區樹林口農場合作，引導學生進入農業社區進行永續農業推廣，將農業廢棄物經由堆肥，轉化為對作物及土壤有用之有機肥料。

校園飲食營養調查

來自管科系、西語系、教科系的學生，在本計畫及學務處之協助下，以管科系「管理學」課程與全家便利商店合作，加入本校衛保組護理師及營養師之協助執行的「飲食新觀點」計畫，針對便利商店健康營養餐食的搭配進行調查，對近千人的問卷及購買資料進行比對，整理出本校教職員生利用便利商店做為午餐時之營養情形並做出報告。

發展地區特色文化活動

與淡水在地工作團隊創創路工作室及淡水在地漁人合作辦理「淡水河沙洲—夏祀文蛤」活動。早期的淡水河

污染嚴重，河水混濁惡臭，在政府及民間合力





SDG3：良好健康和福祉

目標 3.9

2030年前，大幅減少危險化學物質、空氣污染、水污染、土壤污染以及其他污染造成的死亡及疾病人數。

目標 3.d

加強所有國家早期預警、減少風險，以及國家和全球健康風險的管理能力，特別是開發中國家。

淡江行動一

推動永續農業，減少環境污染源

本校 USR 計畫『農』情『食』課—無毒、有機印象淡水計畫，以延續、減碳與永續家園為核心，與淡水紫藤咖啡園、一良茶屋、石門嵩山社區梯田等在地農業發展團體合作，帶領本校師生及在地居民從土壤改良、農田契作、茶農業推廣、農事體驗等活動，推廣永續農業，減少環境污染源，進而同步提升人與環境的健康與福祉。

建置污水處理系統，養護水源

為達到不污染河川水質的目標，淡水校園污水全面納入新北市公共污水下水道管線，集中至政府設立之淡海污水處理廠處理，由

本校負擔污水處理費用，經由處理廠的設備將污水處理至符合國家放流標準後再排放。

投入學術研究，促進水資源管理技術提升

本校設有水資源及環境工程學系，校級研究中心亦設有水環境資訊研究中心，以聯合國永續目標「潔淨水與衛生」為研究之主要目標，持續與政府、民間企業或第三部門合作。相關作為包括協助民間企業處理產業廢水，提升淨水場水質檢測能力，共同研發潔淨水技術。水環系教授取得「含氟廢水處理系統」專利，可提升廢水處理效率，為中小企業解決空間和設備不足的困難。目前與知名電廠合作協助建設廢水處理設備，並將持續與業者合作，以使含氟廢水能成為循環經濟再利用，創造經濟與環保雙贏。



研發淹預報系統，預警水患 降低災害

本校水資源及環境工程學系教師率領團隊（水環境資訊研究中心），協助雲林縣建置「智慧城市淹水預報系統」，運用物聯網即時監測資料，結合時序性淹水預報模式，再透過實際降雨事件驗證模式修正，在水患爆發前提早預警。相關研究以〈Self-organizing maps of typhoon tracks allow for flood forecasts up to two days in advance〉為題，發表於2020年《自然通訊》第11卷（Nature Communications volume 11, Article number:1983(2020)），並透過台灣水文資訊學會與馬來西亞政府合作，以技術輸出方式，協助馬來西亞建置區域淹水預報系統。

國際志工服務，協助提升偏 鄉環境衛生教育

本校經濟系教授培訓學生，組成服務團隊「經探號」，每年寒暑假前往柬埔寨，與當地非營利組織 ECC school 合作，進行國際教育工作，包含英語教學、電腦教學、環境衛生教育，以及當地文化踏查。「經探號」團隊在每年寒暑假深入柬埔寨偏鄉做志工服務，至今已持續五年。這個取自驚嘆號諧音的團隊，就是希望能在世界各地創造許多令人驚豔的驚嘆號。

2022年8月7日至21日，「經探號」團隊於前往柬埔寨擔任國際志工，並舉辦社區衛教工作坊，由 ECC 負責人協助號召周邊五個村落的地方頭人與學生共同參與。工作坊以「潔淨的水」為主題，教導當地居民如何透過沉澱、過濾、煮沸等過程獲得安全的飲用水，過程最後也用這安全的飲用水泡上一杯來自臺灣石門的茶葉，供參加的居民們品嚐，成功結合衛教與文化交流。工作坊最後也教導居民們如何正確洗手，希望能透過「經探號」志工們一步步的帶領與指導，讓 PO 村的衛生習慣與居民健康獲得改善。





SDG4：優質教育

目標 4.7

2030年前，確保所有學子都能獲得永續發展所需的知識與技能，包括永續發展教育、永續生活模式、人權、性別平等、促進和平與非暴力文化、全球公民意識、尊重文化多樣性，以及文化對永續發展的貢獻。

目標 4.a

建立及提升適合孩童、身心障礙者以及性別敏感的教育設施，並為所有人提供安全、非暴力、有教無類、以及有效的學習環境。



探索永續

淡江大學在「永續治理」的理念下，以「永續發展與社會創新中心」作為樞紐，協力全校各大學院，涵育本校「永續力」教育，致力設計與推動教學創新，永續力教育，銜接素養學習趨勢，積極面對全球STEEP新常態，運動各學院專業課程的永續轉型，開設「探索永續」課程的探索式學習，引導學生經歷社會覺察 (social awareness)、社會參與 (social participation) 及社會創新 (social innovation) 之過程，豐沛「探索素養」、「永續素養」兩大核心素養，希望在大學養成教育中，培養出邁向未來的永續公民。

淡江行動一

AI+SDGs 特色雙塔課程

2022年起開設 AI 與永續「特色雙塔」課程，以「AI 與程式語言」及「探索永續」各 1 學分的課程，納入新生校訂必修課程，協助學生認識永續發展，並透過學習 AI 人工智慧，因應未來發展。在「永續治理」的理念下，以永續發展與社會創新中心作為樞紐，協力全校各學院，以涵育本校「永續力」教育為標，開設「探索永續」課程，引導學生經歷社會覺察 (social awareness)、社會參與 (social participation) 及社會創新 (social innovation) 之過程，豐沛「探索素養」、「永續素養」兩大核心素養，希望在大學養成教育中，培養出邁向未來的永續公民。同時開辦全校性 AI 技術與雲端服務課程，推動全校師生創新轉型，加速加值實踐 SDGs。

開放式課程與開放式數位學習平台



本校致力推廣終身學習，重視大學社會責任，提供線上學習課程，以「開放式課程 Youtube 頻道」免費開放一般課程與講座課程，為大眾提供高等教育資源；設置開放式數位學習平台「iClass 學習平台」、「Moodle 遠距教學平台」，提供磨課師課程 (Massive Open Online Course, MOOC) 等免費且開放的教育資源，供世界各地線上學習者加入學習。

提供多樣終身學習課程

開設樂活課程提供銀髮人士活到老學到老；開辦 MOS 專業級證照課程，每年辦理證照考試；辦理各類專業人才證照培訓課程、在職進修課程及視障服務課程，給予社會大眾提供終身學習之機會。

推動世界公民教育課程

本校教育學院承接多項合作計畫，跨足公、私領域，如「學習領導下的學習共同體」、「世界公民教育工作坊」、「經濟弱勢者工作未來工作坊」、「iEARN 國際專業教育知能工作坊」，長期與新北市政府及地

區其他學校合作，進行新課綱課程，辦理教學研討會。其中，教育與未來設計學系教師與新北市多所中小學合作，並透過視訊與香港樂施會連線，共同推動世界公民教育課程，透過案例教學、議題教學、創新教學等課程及模擬演練，帶領中小學生了解社會制度的運作，參與公共事務討論，進而培養學生分析、表達意見及作決定的能力。

專業知能服務學習與USR

系所開設專業知能服務學習課程及學生社團至社區或國小、高中服務；體育處教師至淡水區各鄰里及社區進行銀髮族長者多元化運動課程推廣；「大學社會責任實踐計畫」致力推動社會責任及SDGs，舉辦多項活動，如：食農教育、淡蘭海陸輕旅遊及學習型城鄉建構等，並經常舉辦向公眾開放之講座、工作坊及社區教育課程。

開放圖書資源供大眾使用

圖書館提供免費使用館藏圖書、視聽資料、電子書、電子期刊，校外人士憑證入圖書館；圖書館設置歐盟資訊中心(EUi)，除歐盟官方出版品外，亦提供歐洲與歐盟研究主題之書籍與期刊，並發行電子報(免費訂閱)，開放各界人士諮詢利用，並提供校外人士以付費方式使用電腦。

建置視障資源中心

本校是台灣少數開創視障生入學的學校之一，並成立全國唯一的視障資源中心，之後，服務對象更擴及至不同障礙類別的身心障礙人士，服務項目包括生活方面及就業就學方面的協助及輔導，協助身心障礙人士翻轉先天弱勢，提升就業力。2003年受教育部委託，辦理大專院校暨高中職視障輔具中心及視障點字圖書業務，並成立華文視障圖書館，提供視障

者全方位的圖書資訊服務；2009年與中華電信產學合作，成立全國首座視障客服中心，促進視障者就業機會。2022年相關活動包括：

身心障礙學生安心就學獎助實施計畫：為促進身心障礙學生多元學習及協助身心障礙學生安心就學及未來職涯做好準備，透過資源教室輔導機制或進行職業訓練等，針對成效表現卓越給予獎助，以激勵克服自身障礙主動學習，符合大專校院輔導身心障礙學生之目的。

全方位行銷達人培訓班：本課程與中華民國無障礙科技發展協會合作辦理，藉由全方位行銷課程，讓身心障礙者一起實踐夢想，培養多元專長。透過系統化教學與實務操作、搭配實驗方式記憶以及實際操作練習，將學習企劃與行銷系統化，有助於減少進入行銷領域摸索時間。報名對象：以





SDG5：性別平等

目標 5.c

採用及強化完善的政策與可執行的立法，以促進兩性平等，並提升各個階層女性的權力。

淡江行動一

設置性別平等教育委員會

本校為促進性別地位之實質平等，消除性別歧視，維護人格尊嚴，厚植並建立性別平等之教育資源與環境，依「性別平等教育法」及本校「組織規程第二十條」規定，設置性別平等教育委員會，職掌如下：

- 一、統整學校各單位相關資源，擬訂性別平等教育實施計畫，落實並檢視其實施成果。
- 二、規劃或辦理學生、教職員工及家長性別平等教育相關活動。
- 三、研發並推廣性別平等教育之課程、教學及評量。
- 四、研擬與推動性別平等教育實施與校園

性侵害、性騷擾或性霸凌之防治規定，建立機制，並協調及整合相關資源。

- 五、調查及處理與性別平等教育法有關之案件。
- 六、規劃及建立性別平等之安全校園空間與定期檢視改善措施。
- 七、蒐集校園性侵害、性騷擾或性霸凌防治及救濟等資訊。
- 八、推動社區有關性別平等之家庭教育與社會教育。
- 九、其他關於學校或社區之性別平等教育事務。

及育嬰留職停薪等。

性別平等與婦女研究

為推動性別平等教育，本校圖書館設置性別平等研究網頁，蒐集與婦女研究、性別平等、兩性關係、女權主義等主題之相關資料，有系統地發展性別平等館藏。

每年 3 月，圖書館聯合通識與核心課程中心，舉辦「性別平等主題展」，除舉辦「性別平等主題書展」，並安排「性別平等系列講座」。2022 年性平月活動主題為「性平路上的開拓者：婦運先驅在淡江暨吳嘉麗教授紀念展」。

在台灣推動婦權與性別平等的漫漫長路上，淡江人扮演開拓和倡導的角色，亦是披荊斬棘的勇士，從 1970 年代民歌時期，楊祖珺教授為救援雛妓，舉辦台灣首場戶外慈善演唱會，到 1980 年代李元貞及吳嘉麗教授對婦運及性平的推動，在風聲鶴唳的戒嚴時期，撼動

性別平等措施

為體恤同仁同時兼顧工作與家庭的辛勞，落實照顧幼兒之性別友善職場，本校在請假方面提供多項性別平等措施，包括生理假、產假、安胎休養、產檢假、陪產假、家庭照顧假



傳統的性別與權威框架，喚起婦女的平權與自主意識。本活動藉由回顧淡江人對台灣性平與婦運發展的影響，並紀念性平路上的永恆鬥士--吳嘉麗教授，彰顯本校落實聯合國永續發展目標「SDG5 性別平等」的重要貢獻。

性別平等空間友善化

為鼓勵女性教職員工生哺育母乳，2014年於海事博物館地下一樓（M102）規劃並建置哺（集）乳室，提供隱密舒適衛生的環境，並於2018年重新建置；2018年在校內的宮燈教室區，進行廁所整修，除將男女廁所設備更新外，擴大女廁空間，並皆加裝緊急按鈕，為提升性別平等意識，亦新增一間無性別廁所。

性平路上的開拓者：婦運先驅在淡江
暨吳嘉麗教授紀念展

沙龍講座

覺生紀念圖書館 2樓閱活區

3/8 (二) 14:10-16:00
婦女權益，性平教育，並肩齊步
蘇芊玲
銘傳大學通識教育中心退休副教授
台灣性別平等教育協會監事

3/9 (三) 14:10-16:00
從女科技人生命故事談女力永續
王愷慈
淡江大學大眾傳播學系教授

3/10 (四) 14:10-16:00
勇敢追夢·女科技人
高惠春
淡江大學化學系退休教授、台灣女科技人學會監事
范素玲
淡江大學土木工程學系教授

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SDG6：潔淨水與衛生

目標 6.3

2030年前，透過減少污染、消除傾倒廢物、減少危險化學物質與材料釋放等方式改善水質，將未處理廢水的比例減半，並提高全球水資源回收率與安全再利用率。

目標 6.a

2030年前，擴大對開發中國家的國際合作與能力培養支援，協助其水資源、衛生相關的活動和計畫，包括雨水蓄集、海水淡化、提高用水效率、廢水處理、水資源回收再利用技術。



淡江行動一

建置污水處理系統，防止河川及水源污染

2019年之前，淡水校園設有體育館、游泳館、化學館、工學大樓及外語大樓，共計5座污水處理場，蘭陽校園設置生活污水場1座，每年皆委託合格廠商操作、保養及維護，確保污水場設備正常運作。本校所產生之廢污水先是進入污水場進行化學處理，處理後再行排放入校外污水管道；放流水質經學校定期抽檢、地方環保機關不定期抽檢，皆符合放流水標準。

2019年起，配合政府施作之公共污水下水道完工，淡水校園污水全面納入新北市公共污水下水道管線，集中至政府設立之淡海污水處理廠處理，由本校負擔污水處理費用，經由處理廠的設備將污水處理至符合國家放流標準後再排放，達到不污染河川水質的目標。

為防止受污染水進入乾淨的自來水系統，本校淡水校園、台北校園及蘭陽校園共計設有38座自來水蓄水塔，每座蓄水塔清潔口皆有上鎖管制，非管理人員無法任意開啟。每年委請專業廠商進行塔體清理，清理完成後由台灣檢驗科技股份有限公司（SGS）進行水質樣品檢驗（每3個月一次），檢驗結果皆符合我國環保署訂定之飲用水水質標準。

另外，本校建立校園淨水管道與污水管道分布地圖，由專業水電技術人員排定巡檢計畫，遇有發現異常漏水情事可即時搶修，避免輸水管道之間交叉污染。經實驗室產生之污水亦進行初級處理後，方可排入污水管，經由污水下水道接管至校外污水處理廠進行最終處理。

設置水資源及環境工程學系

本校設有水資源及環境工程學系，分成水資源工程組及環境工程組，皆以提供人類社會用水安全為職志，啟發同學以工程及科學的手



段達成造福社會的目的。

- 一、資源工程組：以水文及水理為基礎，水利工程為主軸，佐以資訊運算科技範疇，課目涵蓋範圍包含流體力學、水文學、明渠水力、洪水防災、海岸工程等範圍，達成興水之利除水之害之水資源永續利用為目標。
- 二、環境工程組：以給水污水工程及水質處理工程為基礎，結合廢棄物處理循環再利用及空氣品質監測等科學範疇，課目涵蓋範圍包含環境化學、固體廢棄物、給水污水工程、微生物學及水質管理等，達成安全用水品質及生態環境永續的願景。

設置研究中心，與政府、企業以及第三部門持續合作

本校校級研究中心水環境資訊研究中心，以聯合國永續目標「潔淨水與衛生」為研究之

主要目標，持續與政府、民間企業或第三部門合作。相關作為包括：

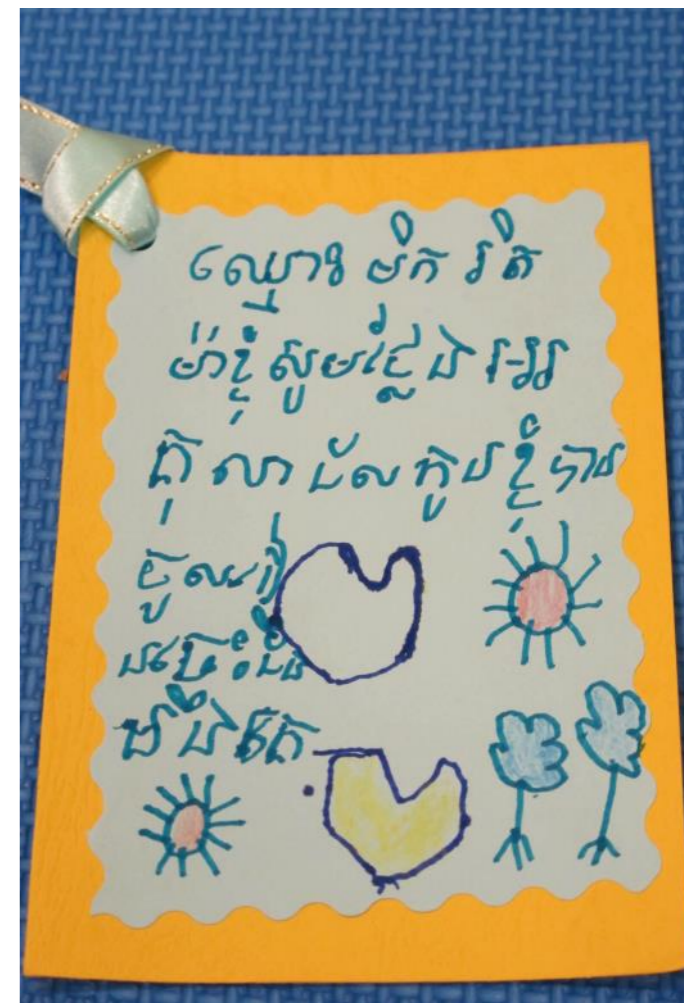
- 一、參與政府政策制定及推動：本校有逾百位教師在政府單位擔任顧問及委員，協助政府制定或推動永續發展目標相關政策，其中水環系教師擔任經濟部所屬台灣自來水(股)公司獨立董事，協助環保署推動水安全計畫 (Water Safety Plan)；擔任經濟部「德基水庫集水區管理委員會」委員，推動政府推動水資源相關永續發展目標。
- 二、協助民間企業處理產業廢水，提升淨水場水質檢測能力，共同研發潔淨水技術：水環系教授研究廢水處理方法，研究的首要目標為將廢水中的污染物質降低再排入河川，讓廢水不會對大自然產生傷害。將物化及生物處理技術，應用在自來水中硬度去除，與工業廢水中重金屬的去除；也獲得科技部補助，研究結合薄膜、化學還原、高壓生物處理程序、浮除、萃取程序以除水中重金屬的

技術。藉由提升廢水處理效率，為中小企業解決空間和設備不足的困難，讓更多業者願意確實解決污水問題，減少河川污染。

外展水資源管理教育

設計「化學遊樂趣」活動，由科技部、教育部、化學學會及產業界共同支持的推廣巡迴服務，以改裝貨車至各地國小、國中及社區進行科普活動，組合講座、樣本收集與分析、實驗等方式，探討水資源相關議題。

本校與柬埔寨 NGO ECC school 進行國際教育工作，將環境衛生教育納為必備的課程，帶領小學生一起進行暹粒河在 PO 村這段的淨川工作，藉由觀察垃圾的類型，以形塑在地人們的衛生意識及水資源保育觀念。





SDG7：可負擔的潔淨能

目標 7.2

2030年前，大幅增加再生能源在全球能源結構中的比例。

目標 7.3

2030年前，使全球能源效率改善率成長一倍。

8年來淡水校園節電率每年至少 1%的目標，電費也自最高峰新台幣 9,126 萬元/年，於 2022 年降至新台幣 7,009 萬元/年。校內亦成立「環境永續暨管理系統推動委員會」，督導、審查及檢討各項節能計畫之執行效益。

推動校內節能減碳措施

淡江行動一

進行能效盤點審

本校自 2003 年實施 ISO14001 環境管理標準以來，逐步落實各項節能措施。於 2006 年建置節能監控系統，2013 年依據 ISO14064-1 標準辦理校園溫室氣體排放量查證，2015 年通過 ISO50001 能源管理標準迄今，並達成近

1. 空調節能：每年皆編列節能改善工程預算，將舊機型之耗能空調設備更新為新式高效能空調設備。
2. 照明節能：逐年編列預算，汰換教學空間及辦公空間的傳統燈具，更新成 LED 節能燈具。
3. 智慧校園：與微軟合作打造「全雲端校園」，與遠傳電信合作，打造「5G 元宇宙淨零碳排校園」，以數位科技輔助教學、行政，降低碳排放率，提升流程效率。
4. 降低契約電量：淡水校園在 2022 學年度持續以降低淡水校園 EUI 值 1% 為目標。
5. 再生建築：依據本校校園規劃委員會決議，近 5 年（2020-2024 年）將不再新建大樓。未來淡水校園、台北校園及蘭

陽校園如有新建築計畫，將優先將舊建築物評估其耐久性並朝空間活化再利用為原則，即以原地現址重建為主，不增加校園非透水鋪面，可降低校園環境衝擊及避免建材資源浪費。

6. 綠色採購：針對軟硬體設備、耗材及建築工程材料等辦理採購時，以能提供環保標章、節能標章、省水標章、綠建材標章及碳標籤等 5 大綠色標章產品之廠商優先承做。
7. 永續交通：與客運公司合作推動電動巴士計畫；校內建置電動車充電樁，並鼓勵公務車優先汰換成電動車款。
8. 植栽固碳：淡水校園內廣植喬木樹種共 90 種，共 1,692 棵，總固碳量超過 478,899kgCO₂e；利用校園生態池試辦微藻養殖固碳。



賀 本校榮獲111年度經濟部節能標竿獎 金獎

9. 植栽負碳：以再生有機農法，將廚餘發酵土混入土壤作為基肥，增加土壤中微生物，供土壤吸收及植物利用，降低大氣中二氧化碳的濃度。

推動提升潔淨能源占比措施

2021 年與校友企業信邦電子 (SINBON Electronics) 攜手將綠電帶入校園，於淡水校園體育館、游泳館頂樓設置太陽能光電系統，共架設 1,636 片太陽能光電板，系統總瓦數 542.52kW。截至 2023 年 7 月底止，總計發電量為 105 萬 4,128 度 (kW/時)，減碳效益為 536.55 公噸 CO₂e。2022 年 3 月起於台北校園屋頂增設棚架式太陽能光電系統，系統總瓦數 99.9kW，截至 2023 年 7 月底止，總計發電量為 5 萬 2,024 度 (kW/時)，減碳效益為 26.48 公噸 CO₂e。

參與國家節能標竿獎評比

2011-2013 年連續三年獲頒中華民國「企業環保獎」，2017 年本校獲得行政院經濟部「節能標竿獎」銀獎，2019 年淡水校園新落成之守謙國際會議中心獲得綠建築銀級標章，2022 年進一步獲得行政院經濟部「節能標竿獎」金獎殊榮，成為節約用電示範大專院校之一。

持續發揮影響力

本校響應並簽署「塔樂禮宣言」(The Talloires Declaration)，於 2013 年與多所院校共同催生「臺灣綠色大學聯盟」，自 2019 年起，本校葛煥昭校長亦擔任聯盟監事，2022 年起擔任聯盟理事。而包含建築系、化材系、水環系、資工系及經濟等系所老師亦皆在能源領域，透過擔任評審委員、執行研究計畫或負責機關培訓等不同身分，持續與產官學界合作發揮影響力。

本校擔任「全球在地化」之示範角色，帶領淡水、蘭陽乃至北海岸地區中、小學校共同成長。2019 年底結合七所小學、淡水在地 NGO 團體及淡水區公所，發表「生態永續淡水宣言」之後，啟動一連串潔淨能源工程，包括校園接駁公車更換為全電動巴士、編列電動公務車預算等；2020 年起逐步於各校園建立太陽能光電系統，截至 2023 年 10 月，3 個實體校園太陽能光電板總供電瓦數可達 761.22kW，同時進行用電資料、數據搜集，與資訊、資工、電機、電工等領域持續合作，培養再生能源領域人才。





SDG8：尊嚴就業與經濟發展

目標 8.5

2030年前，實現全面生產性就業，且每個成年人都能獲得合宜工作，包括青年與身心障礙者，並具同工同酬的待遇。

目標 8.6

大幅降低失業、未受教育或培訓的青年比例。

目標 8.9

推動永續觀光旅遊產業，以創造就業機會，並推廣地方文化與產品。



淡江行動一

提供教職員生及校外人士各項職能培訓

本校持續加強教職員工之永續發展與 AI 創新知能相關訓練與學習，建置全球業界認證的微軟證照考場，透過各種軟硬體技術，將 AI 和雲端應用賦能老師、學生、校友，甚至校友企業，加乘職能發展與就業競爭力。開設 AI 創智學院，導入微軟超過 200 門世界級課程資源，涵蓋「人工智慧、物聯網、大數據、雲端運算、創新創業」等五大領域，為學生建構更符合未來職涯需求的數位能力，並陸續與企業進行產學合作，進行教師種子師資培訓、學生領袖種子培訓、輔導考取 AI 證照，預計證照考試中心啟用之後，將提供 26 項 AI 國際證照考試，以實踐就地考照的便利性。

協助身心障礙人士就學就業

本校是台灣少數開創視障生入學的學校之一，並成立全國唯一的視障資源中心，之後，服務對象更擴及至不同障礙類別的身心障礙人士，服務項目包括生活方面及就業就學方面的協助及輔導，協助身心障礙人士翻轉先天弱勢，提升就業力。2003 年受教育部委託辦理大專院校暨高中職視障輔具中心及視障點字圖書業務，並成立華文視障圖書館，提供視障者全方位的圖書資訊服務；2009 年與中華電信產學合作，成立全國首座視障客中心，為促進視障者就業機會，提供視障資訊素養技能培訓，包括程式設計、無障礙網路、資料庫等相關專業技能培訓；弱視電腦專業技能培訓；視障者轉銜工作與職業輔導。

以 USR 計畫推動地方創生，創造就業機會



淡蘭海陸輕旅遊、智慧互動叭叭走—品牌建構與新媒體加值

本校 USR 計畫「淡蘭海陸輕旅遊、智慧互動叭叭走」以生活美感探索活動為基礎，結合淡蘭古道沿線城市重要特色，為每個城市發展出多種易理解、易操作的美感探索活動。本計畫主要目標是藉由 A3 (AR、AI、APP) 技術，將淡蘭古道的豐富文史以生動的方式呈現，並據此連結宜蘭陸地到海洋文化，導入科技元素，活化在地的特色與生活。透過新興的自媒體 Youtube 行銷方法，吸引更多民眾及年經旅客至淡蘭古道區域觀光。本計畫帶領學生實地至各地進行美感探索與人文踏查，從實際體驗中進行腦力激盪，產出創意的美感手冊指引以及 Youtube 影片腳本。

蘭陽博物館具備專業展示空間、文史資料人才、以及展場行政人力，在地理位置上作為

呈現淡蘭古道的樞紐相當合適。蘭博的長期合作方向，是由師生組成的專案團隊，實地探訪蒐集淡蘭古道的資料，與專業人士合作彙整，最後製作 AR/VR 內容，提供遊客於館中豐富的體驗。此外，亦結合遊戲設計概念，藉由互動裝置（例如智慧對答機器人等），將文史資訊寓教於樂，提高學習興趣。

蘇澳鎮是宜蘭海洋文化的代表之一，目前正積極推動海洋教育、永續發展、以及地方創生。與蘇澳鎮公所長期合作方向，是協助規劃未來城市發展，以及導入物聯網與人工智慧運算，提昇生活品質。方式是師生組成專案團隊，了解蘇澳在地需求，並與公所職員討論，除深化了解地區特性，也藉由實作智慧系統，提供專業服務，落實社會責任。

『農』情『食』課—無毒、有機印象淡水計畫—地方創生之產業與人口扶持

淡江大學『農』情『食』課—無毒、有機印象淡水計畫，自淡江專業知能服務學習課程出發，帶領學生從知農、體農、創農三大主軸，持續深入社區，共同實踐永續。這場大學與社區的共學共創運動，讓學生從接近真實世界獲得更深刻的學習機會，體驗動手改變世界的感動。學生作為種子投入並提出各種創新提案、從市集到香草花園建置、農事體驗活動辦理、拍攝紀錄影片，甚至結合設計能量為小農產品重新包裝及思考行銷通路，募資平台合作等共同營造無毒、有機印象淡水。帶領大淡水地區最重要的關係人口—學生，強化學生對於大淡水區域的認識與情感培養。引導學生「幫助在地發掘需求、解決問題」之餘，投作相關產學合作促使更多淡江學子未來有機會在大淡水紮根，同時扶

持產業發展。從餐桌出發傳遞食物所承載的故事與文化，並為地方創生創造二地居的人口數，這樣的精神正好與聯合國永續發展 (SDGs) 精神不謀而合。





SDG9：產業創新與基礎設施

目標9.1

發展高品質、可靠、永續、具韌性的基礎設施，包括區域以及跨境基礎設施，以支援經濟發展和提升人類福祉，並聚焦提供所有人可負擔且公平的管道。

淡江行動一

AI+SDGs=∞

本校校長於 2021 年 10 月 30 日 110 學年度教學行政革新研討會中揭示，本校 2021 年正式以「AI+SDGs=∞」為校務發展重心，未來

將以「SDGs」為核心理念，整合在地、國際、智慧、未來等要素，同時運用「AI 技術與雲端服務」做為創新的策略工具，以達成「共創大淡水，智慧大未來」的願景。

根據學術期刊《自然-通訊》(Nature Communications)，一篇被引用超過百次的論文〈人工智慧在達成永續發展目標的角色〉

(The role of artificial intelligence in achieving the Sustainable Development Goals)，AI 對 SDGs 可以促進實現 134 個細項目標，也可能抑制 59 個細分目標；產生積極影響的比例是 79%，消極影響則是 35%。結論是，AI 對達成 SDGs 目標，有相當積極的影響。

秉持同樣的信念，本校相信運用 AI 大數據、互聯網及雲端科技為基礎，將可以增值、加速實踐聯合國永續發展計畫(SDGs)。

本校與微軟合作發展全雲端校園，全力推動 Smart PDCA (Paperless、Digital、Collaborative、Automatic and intelligent)，有效精簡行政流程和時間成本；將課程數位化，以線上即時或非同步教學方式，在疫情期間，停課不停學；於校內打造 AI 應用實境場域，建置全球業界認證的微軟證照考場，賦能老師、學生、校友，甚至校友企業，加乘職能發展與就業競爭力。

本校開設 AI 創智學院，導入微軟超過 200 門世界級課程資源，涵蓋「人工智慧、物聯



網、大數據、雲端運算、創新創業」等五大領域，為學生建構更符合未來職涯需求的數位能力。AI 創智學院陸續與穩懋半導體、聯邦銀行、宏盛集團等企業進行產學合作，也進行教師種子師資培訓、學生領袖種子培訓、輔導考取 AI 證照，預計證照考試中心啟用之後，將提供 26 項 AI 國際證照考試，以實踐就地考照的便利性。

2022 年 6 月 7 日與遠傳電信簽署「5G 元宇宙淨零碳排校園」MOU，在與臺灣微軟合作「全雲端智慧校園」的基礎上，持續推動數位轉型；同時成立永續發展與社會創新中心，下轄「淨零碳排」、「社會實踐」、「韌性治理」三個組，積極在全校推動聯合國永續發展目標。

2022 年起開設 AI 與永續「特色雙塔」課程，以「AI 與程式語言」及「探索永續」各 1 學分的課程，納入新生校訂必修課程，協助學生認識永續發展，並透過學習 AI 人工智

慧，因應未來發展。在「永續治理」的理念下，以永續發展與社會創新中心作為樞紐，協力全校各學院，以涵育本校「永續力」教育為標，開設「探索永續」課程，引導學生經歷社會覺察 (social awareness)、社會參與 (social participation) 及社會創新 (social innovation) 之過程，豐沛「探索素養」、「永續素養」兩大核心素養，希望在大學養成教育中，培養出邁向未來的永續公民。同時開辦全校性 AI 技術與雲端服務課程，推動全校師生創新轉型，加速加值實踐 SDGs。





SDG10：減少不平等

目標 10.3

確保機會平等、減少不平等現象，包括消除歧視的法律、政策及實務作法，並推動適當的立法、政策與行動。

淡江行動一

視障資源中心

本校是台灣少數開創視障生入學的學校之一，並成立全國唯一的視障資源中心，之後，服務對象更擴及至不同障礙類別的身心障礙人

士，服務項目包括生活方面及就業就學方面的協助及輔導，協助身心障礙人士翻轉先天弱勢，提升就業力。2003 年受教育部委託，辦理大專院校暨高中職視障輔具中心及視障點字圖書業務，並成立華文視障圖書館，提供視障者全方位的圖書資訊服務；2009 年與中華電信產學合作，成立全國首座視障客服中心，促



進視障者就業機會。

就學補助方案

本校提供各種就學補助及學雜費減免方案，協助軍公教遺族、原住民籍、低收入戶、中低收入戶、身心障礙學生、身心障礙人士子女、現役軍人子女或特殊境遇家庭子女安心就學。學校並設有身心障礙學生獎學金、友愛獎學金等超過 20 種校內獎學金，各系所及處室設有工讀機會，皆優先提供經濟弱勢家庭學生申請。

開放教育資源，提供終身學習機會

本校設有大量實體及線上課程，供民眾免費或付費參與，開放圖書館資源供校外人士使用，並且舉辦諸多講座、研討會，免費供社會人士參與，提供校外人士終身學習機會。

職能培訓課程，翻轉經濟弱勢

本校配合勞動部產業新尖兵補助計畫，開設 Python、AI 就業實戰班、國際企業數位行銷人才培訓班，服務失業青年，透過培養職場技能，提升其就業力。

推動性別平等教育

本校為促進性別地位之實質平等，消除性別歧視，維護人格尊嚴，厚植並建立性別平等之教育資源與環境，依「性別平等教育法」及本校「組織規程第二十條」規定，設置性別平等教育委員會。

青銀共學與課後陪伴

本校 USR 計畫團隊及學生志願社團，以里辦公室或社區組織為基地，建構以社區里鄰內



的長者及學童為服務對象的陪伴機制，提供長照據點服務及學童課後照顧及補救教學，支援社區生活營造。

柬埔寨 ECC 合作夥伴計畫

本校經濟系老師培訓學生團隊在每年寒暑假前往柬埔寨與當地 NGO ECC school 合作，進行國際教育工作，包含英語教學、電腦教學、環境衛生教育，以及文化踏查工作。ECC school 所在的村落緊臨世界遺產吳哥窟，是一個貧困村落，當地兒童們普遍期盼未來能成為有豐厚收入的導遊。因此他們需要英文能力與電腦能力，藉以發展觀光事業。該師生團隊在當地的服務工作中，體察到環境衛生的嚴重問題，進而將環境衛生教育納為必備的課程，並帶領小學生一起透過淨川工作，提升在地人們的衛生意識。即便是疫情期間，工作仍然持續推動，從實體搭配線上的方式，也從單點的對話，逐漸擴展到更多的專業連結與研討。





SDG11：永續城市與社區

目標 11.a

透過加強國家和區域發展規劃，促進城市、郊區與農村地區之間，經濟、社會和環境的正向連結。

淡江行動一

淡水好生活—學習型城鄉建構計畫

USR 淡水好生活「2018-19 年生活圈營造計畫」與「2020-22 年學習城鄉建構計畫」透過將課程與學生帶到場域，邀請社區一起行動，面對都市發展轉型的動力，推動種種的生活實驗，探索新的生活方式的可能。主要的工作內容包括「國際連結」、「環境改善」與「生活實驗室」等三場域實踐模式，同時進行「專業



智庫」與「教學平台」二個教學研究的累積機制。我們將這個行動成為「有任務的學習」，以學習為主，探索城市作為知識生產場域的可能，並發現問題與尋求解決方案，將經驗與行動回饋社會，盤整五年所累積的經驗，回應本校「112-116 年校發計畫」的目標「打造雲端永續大學城」。我們累積了十條「地方學習」路徑，提出十個行動提案，作為五年 USR 計畫之後，本校持續努力的社會任務與積極目標。透過社會參與，持續精實淡江大學的專業知能服務與社會責任，將這些行動將淡江大學與淡水場域連在一起，可以成為推動淡水地域轉變的機制力量。十個行動提案條列如下：

1. 大淡水教學資源分享平台
2. 環境教育基地與淡水生態網路建構計劃
3. SDGs 北淡環境議題倡議聯盟
4. 在地學習與流域課程



5. 支援社區的生活世界營造
6. 「大淡水全記錄」紀錄片
7. 經營一條城市文化參訪遊廊
8. 野學坊：「北海岸」地方創生學院
9. 國際連結暨外籍生亞洲城市治理經驗與賦能計畫
10. 「大學學習」自主學習課程

二十年間，淡水人口從九萬增加到十九萬。新的重劃區（沙崙、新春街、北新路、）與新市鎮，擴展了城市範圍，也轉變了淡水的城市內容。另一方面，歷史街區在熱絡的觀光產業下，卻面臨人口外移與生活設施不足的狀況。持續的透過與地方政府機構與組織共同的論壇舉辦，來勾勒未來淡水，經營一個觀光客與居民共享的可居城市，這十條學習

路徑將致力於去連結與編織人與土地新的生態系關係。

本計畫透過行動整合在地量能，將大學課程與師生帶到真實場域，透過社區參與的過程，累積地方生活系統轉變的可能。邀請不同利害關係人及團體參與，在每一次的對話中建立共識、形成行動，來逐漸凝聚地方意識，共同推動地方的改變。同時在實作中進行創新教學的嘗試，聚焦五大分項任務：國際連結、在地學習（田野學校、流域課程、大淡水全記錄）、百年市街（玩心系列、史學敘事力）、社區陪伴（文化遊廊、環境構築）、教學平台。以帶狀操作模式持續運行實作、交流。

2022 年主要的成果與亮點包括：

2022.03 成果展 | USRxCSR 淡味創生知行學

「USRxCSR」結合校友企業與學校專業實踐共同以執行社會責任為目標，特別策劃今年的春之饗宴，以「淡味創生知行學」為主題，

結合了聯誼、展覽與學術研討會多項活動，希望讓校友企業與學校協力攜手，呈現本校師生與校友實踐社會責任的成果展覽，期待以知道與行動的學問、知道與行動的學習、知道與行動的學校精神，傳達本校永續不息的理念。

2022.05 研討會 | 淡水地方文化參訪實務經驗研討會

這個研討會從 USR 計畫的成果分享開始，邀請長時間投入經營的在地夥伴一起參與，進行文化參訪經驗的交流與討論。會議中我們邀請了台灣大學建築與

城鄉研究所的王志弘教授與會分享專題講座「導覽作為方法」，並發表 USR 計畫以物件自導探索的三件成果「實境解謎探索書」、「歷史繪本」、「街角博物館之真人圖書館」，下午場次以「導覽」為主軸，從地方文史、場館設施、街區創生三個面相深入導覽的經驗談。

2022.06 大淡水全記錄 | 十年有成

「大淡水全記錄」計畫從 2012 年開始，已邁入第十個年頭。結合「影視專案企劃」、「影視專案製作」兩門課程，帶領學生以具體行動記錄社區，系統性地保存大淡水地區的文史、產業、社會、教育之美好故事，完成了《人物志》、《食貨志》、《風土志》、《裨史志》、《炫光志》、《新住民志》、《里民志》、《良師志》、《環保志》、《熟齡志》等主題。這些紀錄片典藏在「淡水維基館」，成就了淡水地區庶民與土地孳生的人文經驗。

2022.08 田野學校 | 五年課程模組建制

本校在 2018 年大學社會責任計畫中提出「世界遺產潛力點田野學校工作坊」，針對淡水歷史場域開設課程，鼓勵來自不同科系的同學參加，並有跨科系的指導老師全程參與（建築系、課程所、教科系）。在課程中提出主題式的城市保存行動方案，然後尋求

活遺產」營造面向上累積經驗。

2022.08 國際鏈結研討會 | 奠基地方彈性與彈力的國際服務工作

此次會議聚焦國際鏈結工作在疫情之後所面臨的困境與挑戰，做為各大學在面對疫後的中長期規劃參考。由南華、高醫、中原、淡江共 4 所大學的 USR 團隊一同分享投入在地與國際服務工作的作法與成果，並以疫後的困境與挑戰為題，分享實踐經驗。

2022.09 社區陪伴 | 正德里燕子特色社區營造成果發表

延續 2019 年的「燕子步道」核心概念與目標，帶領居民擴大認識社區周邊開放空間，進行友善環境的社區認同與構築營造活動，希望能藉由邀請正德里居民參與環境特色指認，進行空間友善性與公共性之討論。為了達成社區特色認知的目標，特別企劃「燕子遊戲巷」藝術牆面繪圖工作坊，邀請社區銀髮居民與社區孩童一起來認識

紀錄片、影片系列 (編輯)

《淡水開港一百六十年》



淡江大學資圖系林信成老師計畫成果之一 (2022)

《基隆雙城四百年》主題影片



淡江大學資圖系林信成老師研究計畫成果之一 (2021)

大淡水熟齡志



淡江大學大傳系王慰慈老師帶領學生拍攝之紀錄片 (2022)

媒體專訪



教育廣播電台季潔專訪林信成教授 (2019-2021)



資源，將提案實踐，在「社區設計」與「生



SDG12：負責任的消費與生產

目標 12.8

2030年前，確保各地人民都能具有永續發展的相關資訊和意識，以及與自然和諧共處的生活模式。

目標 12.5

2030年前，透過預防、減量、回收和再利用，大幅減少廢棄物產生。

淡江行動一

以政策促進負責任的消費行為

為促進負責任的消費，本校訂定「源頭減量」、「綠色採購」、「資源回收」及「危害預防」等政策。要求餐飲廠商供應之食品均符合安全衛生相關法規，以在地食材優先，禁止基改食材；校園各類採購首重環保標章之產品，2021 年本校採購以環保標章為主的綠色



產品金額高達新臺幣 798 萬餘元，2015-2022 年間連續 7 年榮獲新北市政府「綠色採購績優單位獎」。

減少廢棄物產生

本校設置環境保護及安全衛生中心（簡稱環安中心），依規定嚴格管理並妥善處理教學實驗產出之有害廢棄物，結合 ISO45001 職業安全衛生標準，確保人員健康與環境安全。全校執行垃圾細分類，餐廳嚴格執行廚餘分類回收，垃圾均無運往垃圾填埋場。商店不提供塑膠袋及一次性吸管，餐廳採用高溫清洗重複使用之餐具，推廣低碳便當，自備環保餐具享優惠；堪用之報廢設備公開提供移轉續用。餐飲廠商之訂購，均需登錄於校園食材登錄平台，以備查驗；政策均擴展到供應商外包服務及供應鏈。

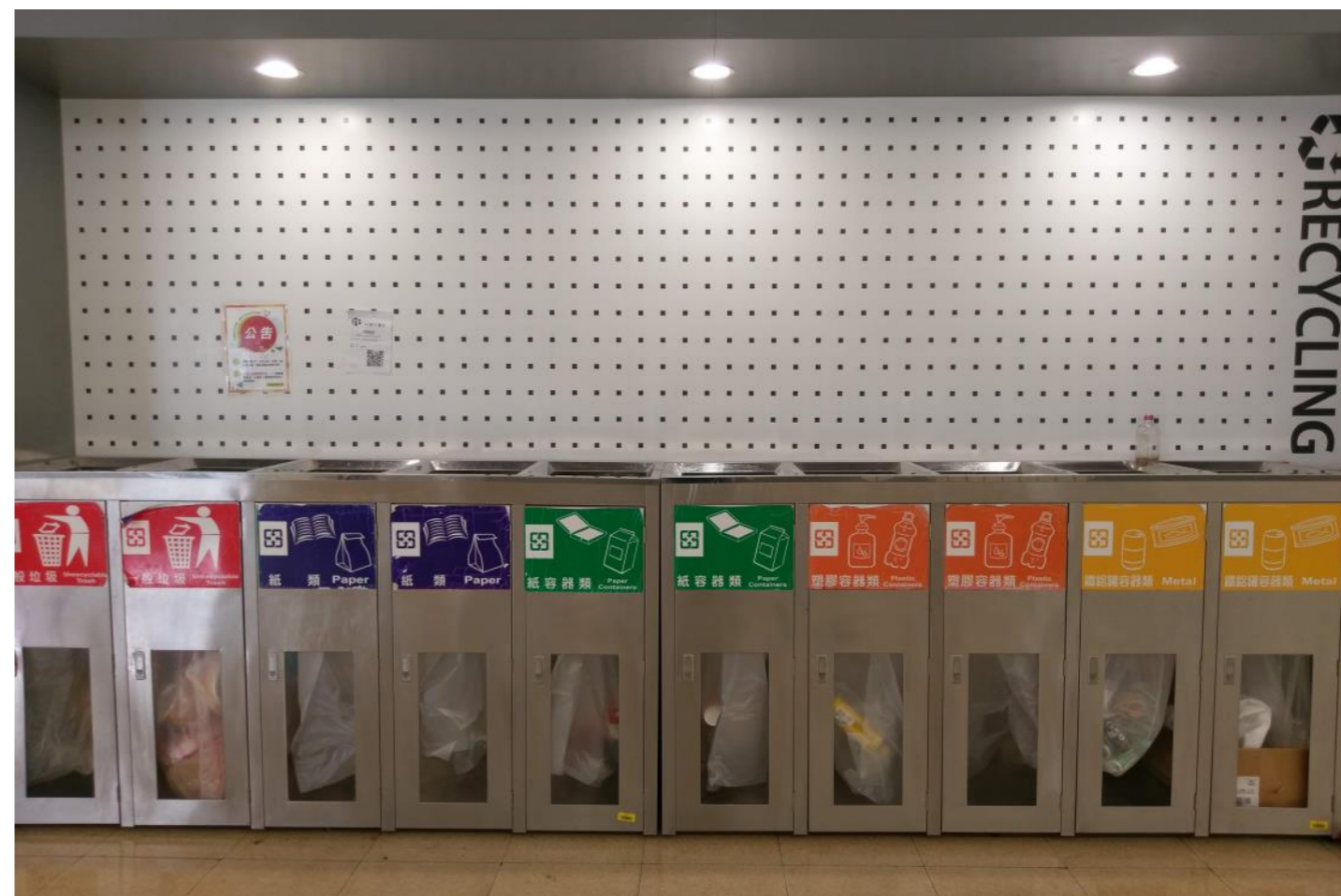
在減少城市中的負面影響，特別是城市廢棄物方面，本校校園規劃委員會決議未來 5 年（2021-2025 年）將不再新建大樓，優先評估舊建物之耐久性並朝空間活化再利用為原則，降低校園環境衝擊、避免建材資源浪費。推動各項節電節能，減水減廢措施，提升可再生能源占比，降低溫室氣體排放量。

大學社會責任實踐

本校『農』情『食』課——無毒、有機印象淡水計畫，以延續、減碳與永續家園為核心，透過「知農、體農、創農」的過程，深入農業社會，理清當地現階段農業現況。2022 年持續深入社區，帶領學生投入地方創生，從建置微型市集到香草花園，辦理農事體驗活動，拍攝紀錄影片，為小農產品重新設計包裝，開創行銷通路，與募資平台合作，扶持產業發展。

減少城市發展負面影響

研究能量支援永續發展



持續與政府、民間企業或第三部門合作，包括協助民間企業處理產業廢水，共同研發潔淨水技術；受政府經濟部水利署委託，研發淹水預報系統；提供應用低碳經濟或技術的新創企業定期輔導，協助進駐廠商申請政府計畫案，提供貸款與創業基金相關資訊，發展環境軟體開發應用計畫；開設課程，輔導新創企業募資與行銷，並媒合與本校教師之產學合作。

化材系教師指導學生參加由行政院環境保護署毒物及化學物質局與教育部合辦 109 年「第 2 屆大專校院綠色化學創意競賽活動」，以「Electrospinning of Poly(lactic acid) by Using Environmentally Friendly Solvents」獲得大學組佳作，於 11 月 19 日在全國大專院校之 21 組大專組中取得佳績。綠色化學 12 項原則是開發環境無害產品和工藝的指導，受到化學

界廣泛的重視。以乙酸甲酯 (methyl acetate, MAC) 及二甲基亞砜 (dimethyl sulfoxide, DMSO) 有機化合物結合靜電紡絲技術製備微米/奈米纖維，以 MAC 和 DMSO 混合成 7:3 共溶劑，配製 8wt% 的高分子溶液進行靜電紡絲，減少對環境的危害。

永續經營的承諾

為展現投入永續經營的承諾，淡江大學於 2021 年 6 月發佈「2020 淡江大學社會責任與永續報告書」，審視永續行動之執行與成效。該報告獲得 2021 年台灣企業永續獎「永續報告書—銅獎」殊榮，同時獲頒「永續單項績效—社會共融領袖獎」，及 2 件「永續發展目標行動獎」。2022 年 8 月發佈了「2021 淡江大學永續報告書」，更加聚焦利害關係人的溝

通對話，運用更有效率的工具，針對重大議題進行分析，依循國際規範 GRI 準則，委託第三方進行認證，務使報告內容精準、具體，呈現本校推動永續目標的行動及決心。「2021 淡江大學永續報告書」榮獲 2022 年 TCSA 台灣企業永續獎「永續報告書—金獎」。





SDG13：氣候行動

目標 13.3

針對氣候變遷的減緩、調適、減輕衝擊和及早預警，加強教育和意識提升，提升機構與人員能力。

淡江行動一

宣示 2050 年達到淨零碳排

為了響應《巴黎氣候協定》以及聯合國號召的永續發展目標，淡江大學宣示將於 2050 年達到淨零碳排。為實現這個承諾，必須投注大規模的行動，全面提升能源使用效率，做好水資源的管理，因此需要動員全校師生，結合地方和社區的力量，共同實踐活化環境永續力

的行動。

推動環境永續教育

本校為全球學子提供學習良好水管理的教育機會，設有水資源及環境工程學系，分為水資源工程組及環境工程組，啟發學生以工程及科學為手段，促進水資源保護及環境永續發展。另外，為提升學生對全球永續轉型重大議題的認知，思辨數位化變革下人與環境共存的挑戰，將永續目標融入專業知能，特設置「永

續發展」微學程，開放所有學生選修。以主軸式議題串連三大領域中不同學門的通識課程，課程內容包括「海洋科技」、「人權與社會正義」、「環境倫理」等，奠定學生永續發展的知識涵養。

2022 年起開設 AI 與永續「特色雙塔」課程，以「AI 與程式語言」及「探索永續」各 1 學分的課程，納入新生校訂必修課程，協助學生認識永續發展，並透過學習 AI 人工智慧，因應未來發展。在「永續治理」的理念下，以永續發展與社會創新中心作為樞紐，協力全校各學院，以涵育本校「永續力」教育為標，開設「探索永續」課程，引導學生經歷社會覺察 (social awareness)、社會參與 (social participation) 及社會創新 (social innovation) 之過程，豐沛「探索素養」、「永續素養」兩大核心素養，希望在大學養成教育中，培養出邁向未來的永續公民。

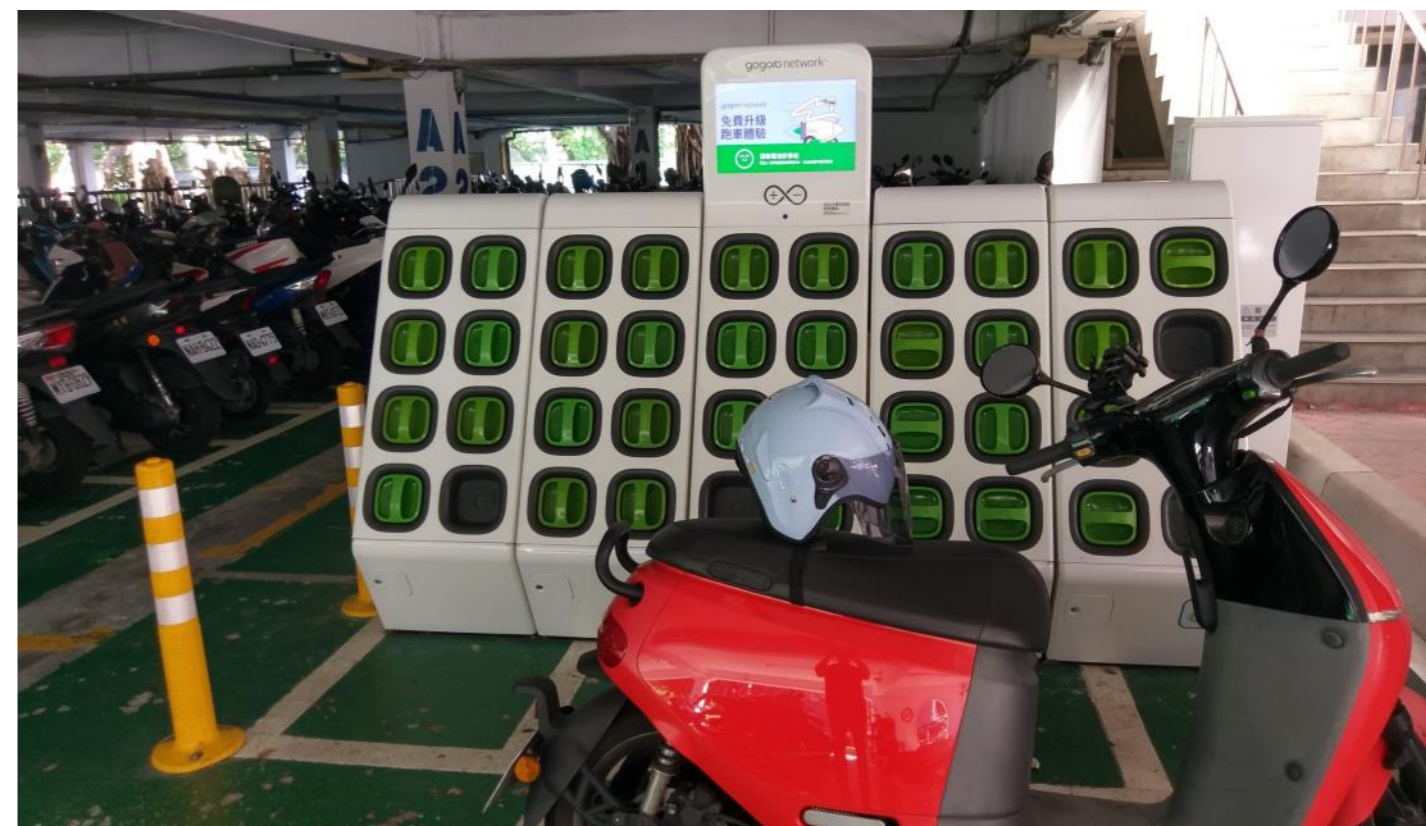
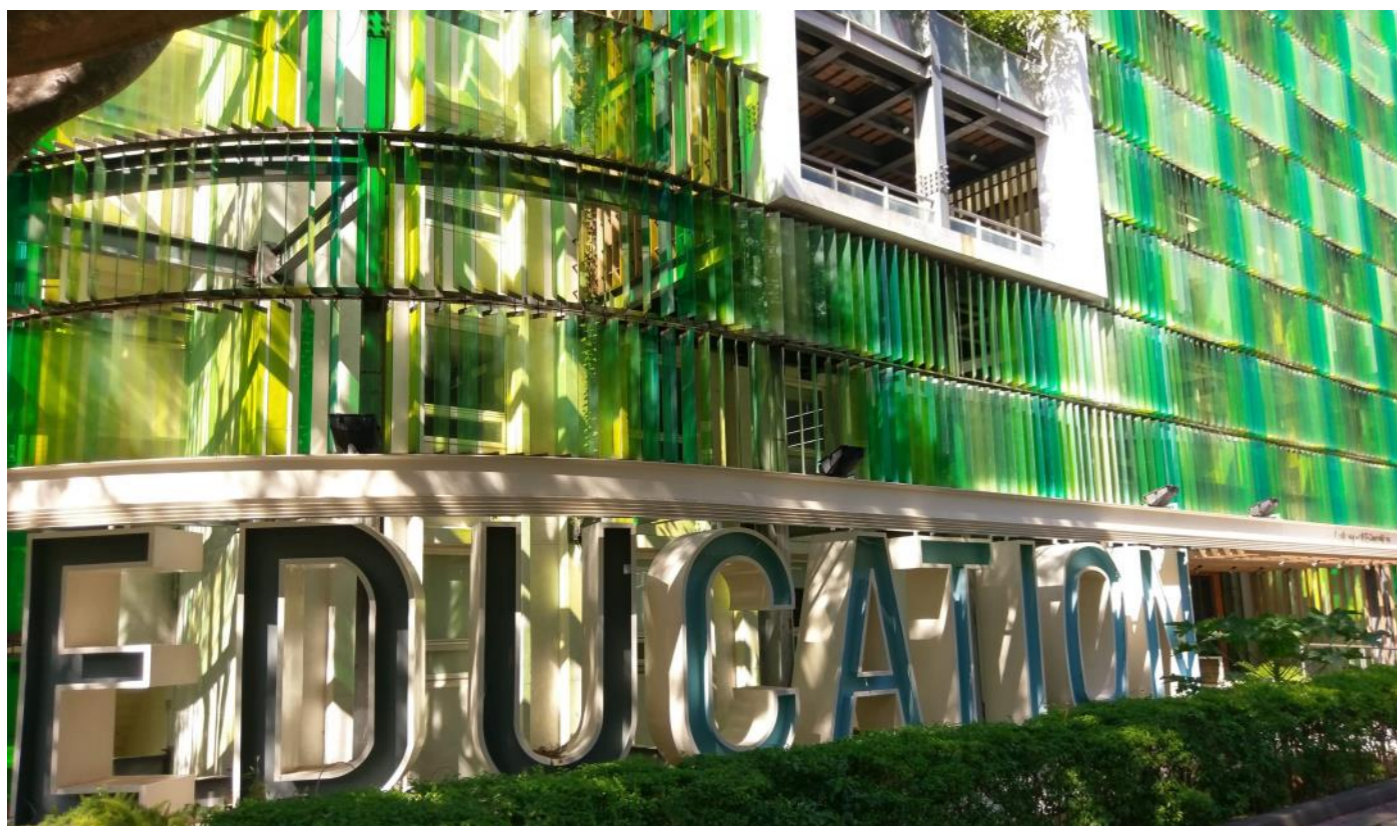
為協助產業了解永續發展相關法規政策，制定實施措施，培養永續管理人才，本校推廣教育處與國際認證中心及今周刊等機構合作開發多項認證課程，包括：

1. 永續發展碳管理認證分析師、規劃師、管理師三階段系列課程
2. 歐盟永續管理師培訓班
3. 企業 ESG 永續管理師認證課程

研究與計畫

本校設有水資源及環境工程學系，校級研究中心亦設有水環境資訊研究中心，以聯合國永續目標「潔淨水與衛生」為研究之主要目標，持續與政府、民間企業或第三部門合作。本校教師擔任台灣自來水公司獨立董事，協助環保署推動水安全計畫 (Water Safety Plan)；協助民間企業處理產業廢水，提升淨水場水質檢測能力，共同研發潔淨水技術；擔任政府部門之防災諮詢委員，並受政府經濟部水利署委託，提供水庫防洪運轉系統維護與操作諮詢，評估水庫容量有效排洪，以降低洪水造成的溢淹災害，減少因受颱風洪水侵襲而導致之生命財產損失。

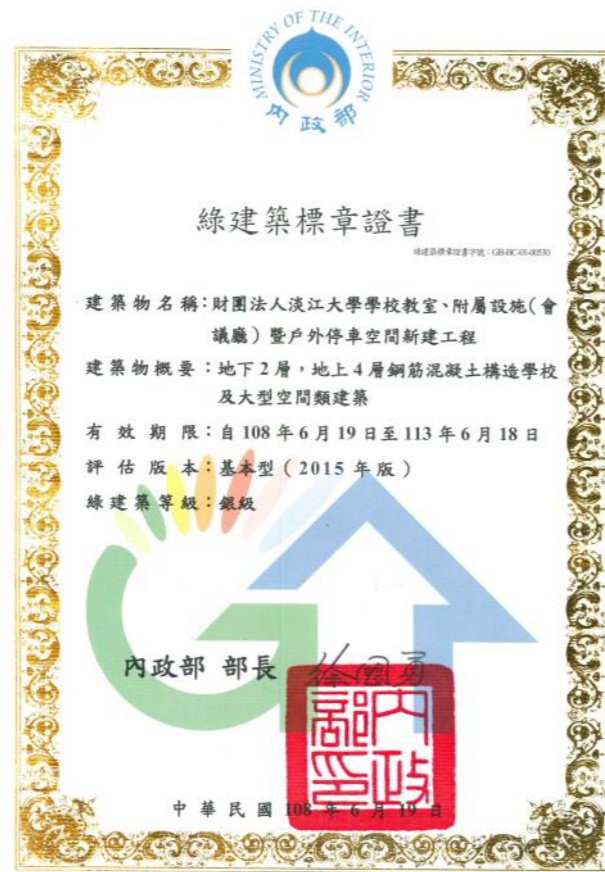
本校水資源及環境工程學系教師率領團隊



(水環境資訊研究中心)，協助雲林縣建置「智慧城市淹水預報系統」，運用物聯網即時監測資料，結合時序性淹水預報模式，再透過實際降雨事件驗證模式修正，在水患爆發前提早預警。相關研究以〈Self-organizing maps of typhoon tracks allow for flood forecasts up to two days in advance〉為題，發表於2020年《自然通訊》第11卷(Nature Communications volume 11, Article number:1983(2020))，並透過台灣水文資訊學會與馬來西亞政府合作，以技術輸出方式，協助馬來西亞建置區域淹水預報系統。

永續意識提升

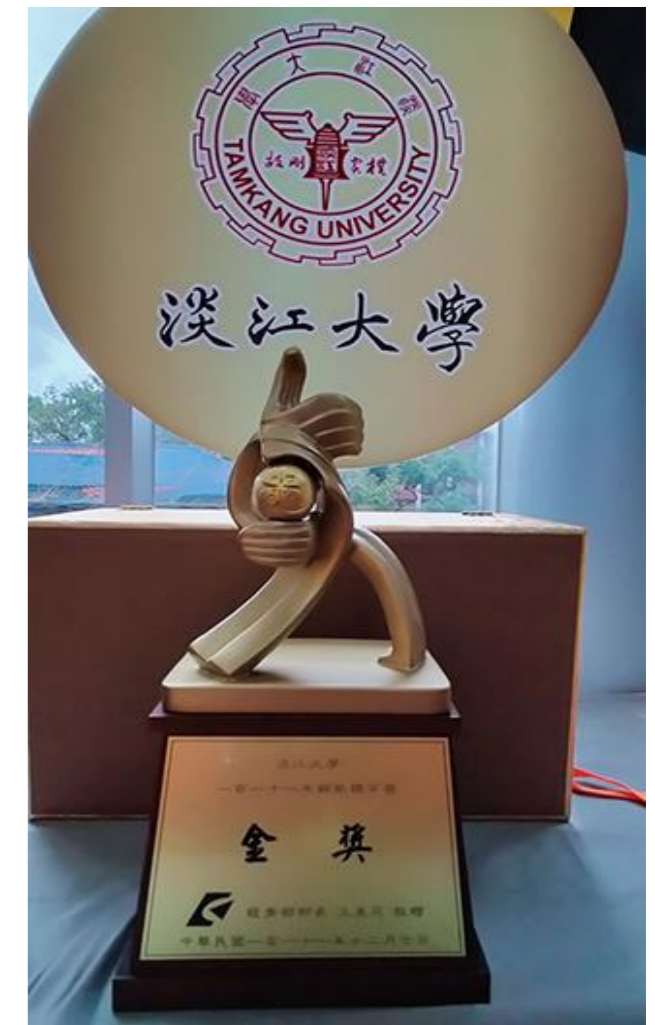
2019年開始，本校每一年邀請北淡地區的大中小學學校師生與社區組織關懷團體，共同舉辦年度的「環境議題」論壇。2019年氣候行動，2020年海廢行動與2021年水資源議題，2022年參與扶輪社所舉辦的海岸植樹活



動，尋求地域合作的可能。透過這些永續關鍵議題將大學與場域緊密連結，集結為一個或數個社群，邀集不同利害關係人及團體參與，逐步形成地方意識，共同推動地方的改變。

營造永續校園

本校就「學校基本永續概念」、「能源管理與查核制度情形」、「節能措施推動成果及績效」和「未來節約能源措施及目標」四項重點，積極推動節能減碳，獲得經濟部頒發111年度經濟部節能標竿獎金獎肯定，該獎項係經濟部為推動節約能源、建立能源查核及管理制度，以提升能源使用效率及抑低二氧化碳排放而設置。在永續行動策略方面，本校訂定短期「奠基永續校園之學校定位」、中期「成為實踐永續環境





SDG14：水下生命

目標 14.1

2025年前，預防及大幅減少各類型的海洋污染，尤其來自陸上活動，包括海洋廢棄物和營養物污染。

淡江行動一

源頭減廢

本校要求福利部門（餐飲）廠商限制使用一次性餐具，不提供塑膠袋、免洗筷、免洗湯匙等製品，以及內用不提供一次性塑膠吸管等規定，以期降低塑膠袋與塑膠製品的使用。美

食廣場各式販售餐點訂有環保分級價策略：自備餐具承裝享有最優惠 3-5 元之折扣，其次為內用，如未自備餐具外帶則須付出最貴之成本，引導教職員工生自備餐具。

綠色採購

落實採購前評估（優先以其他單位閒置品取代新購），於採購時優先購買對環境衝擊較

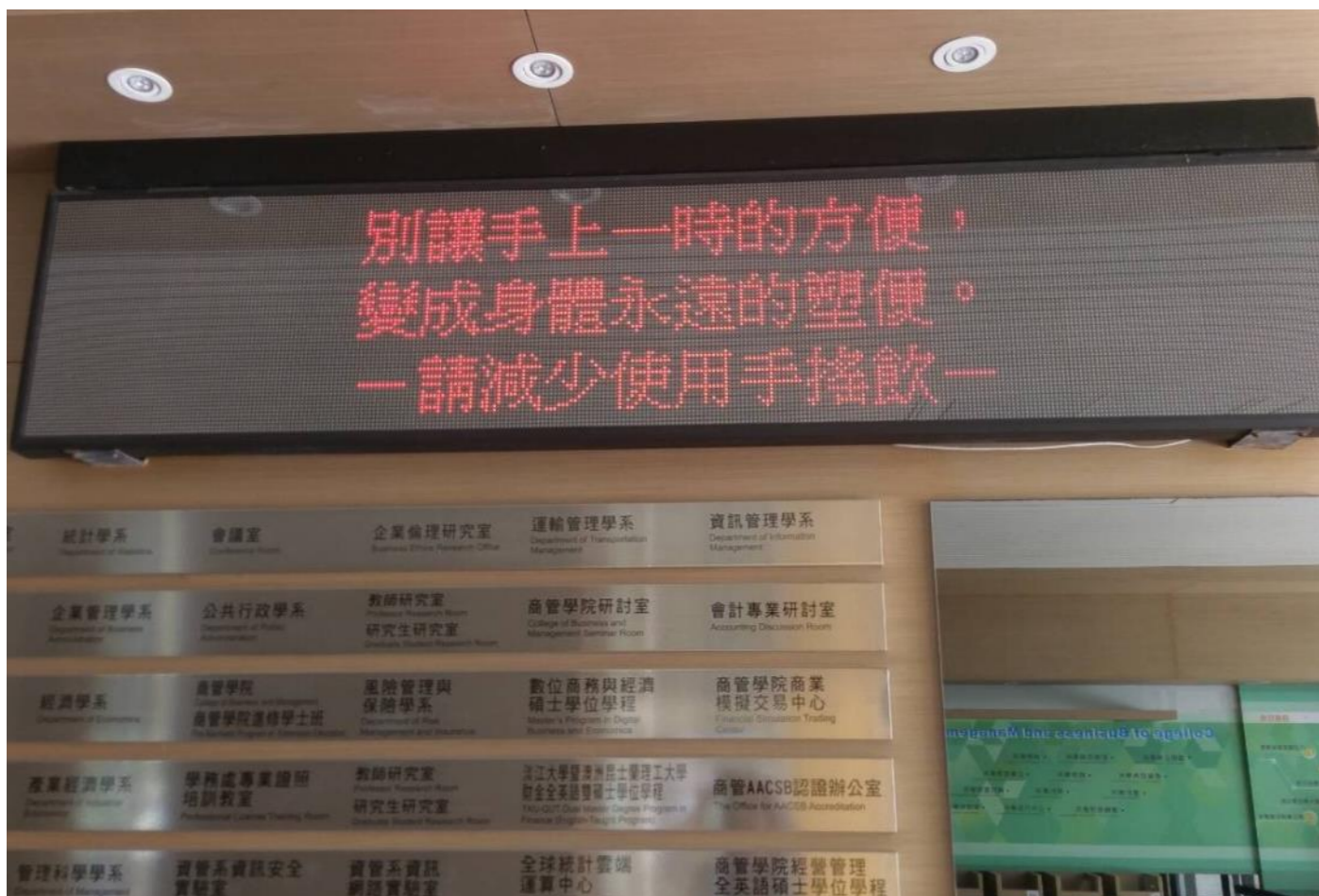
少之產品，包括可回收、低污染、省資源的產品，特別以「環保（節能）標章」為先決原則，鼓勵綠色產品之生產。

資源回收

遵守我國廢棄物清理法相關法規，並依據 ISO14001 標準落實執行各項資源回收，包括紙張、鐵鋁罐、寶特瓶、廢電池、碳粉匣及廚餘等。在各樓層及室外垃圾集中場設置資源回收筒，回收之一般垃圾運至垃圾集中場壓縮處理，並將資源垃圾分類放置，處理後分別送至垃圾焚化場及資源回收場。

廢棄物管理

本校事業廢棄物主要為一般事業廢棄物，依照本校廢棄物管理與資源回收程序書進行分類、貯存及清除；部分屬於有害事業廢棄物，來自於學校衛生保健組之生物醫療廢棄物，則製作事業廢棄物清理計畫書，依政府規定辦理



清運處理。

本校實驗室廢液回收清運處理依據《廢棄物清理法》第 28 條規定辦理，委託經中央主管機關核可之清運廠商（國立成功大學環境資源研究管理中心資源回收廠）代為清運處理，每年清運 1-2 次，並保留廢棄物運送聯單紀錄存查，確保校園實驗室廢棄物產出、貯存、清理過程皆依我國環保、工安、運輸等相關法規辦理。

污水納管

為達到不污染河川水質的目標，淡水校園污水全面納入新北市公共污水下水道管線，集中至政府設立之淡海污水處理廠處理，由本校負擔污水處理費用，經由處理廠的設備將污水處理至符合國家放流標準後再排放。

淨灘活動

每年舉辦多次淨灘活動，帶領師生至淡水附近海灘進行淨灘，推廣生態環境維護教育，以行動支持生態永續。

倡議聯盟

2019 年開始，本校每一年邀請北淡地區的大中小學學校師生與社區組織關懷團體，共同舉辦年度的「環境議題」論壇。2019 年氣候行動，2020 年海廢行動與 2021 年水資源議題，2022 年參與扶輪社所舉辦的海岸植樹活動，尋求地域合作的可能。透過這些永續關鍵議題將大學與場域緊密連結，集結為一個或數個社群，邀集不同利害關係人及團體參與，逐步形成地方意識，共同推動地方的改變。





SDG15：陸域生命

目標 15.1

2020年前，根據國際協議的義務，確保陸地與內陸淡水生態系統及其功能運作，獲得保護、復原和永續利用，尤其是森林、濕地、山脈和旱地。

淡江行動一

推廣永續農業

USR 計畫『農』情『食課』一無毒、有機印象淡水計畫，從知農、體農、創農三大主軸進行實踐，從香草花園建置、農事體驗、紀錄片拍攝，甚至結合設計能量，為優質小農產品

重新包裝及思考行銷通路，舉辦市集，推廣特色農業創生產品，與募資平台合作，共同扶植無毒、有機的永續農業。

2022 年相關活動包括：

一良茶屋之茶文化五感體驗課程：本校視障資源中心與 USR「農情食課」計畫，為幫助偏鄉地區地方創生，及讓視障群體認識北海岸大淡水地區，3 月 10 日在淡水石門區一良

茶屋聯合舉辦茶文化體驗課程由一良茶屋謝宜良主講，帶領視障資源中心師生認識茶廠，親自採茶、揉茶，同時認識焙茶技巧和製茶流程。

北海岸飲食印象文化系列活動：系列活動共有十場，每次邀請大淡水地區不同的農家前來分享，讓參與者能夠增加這些別具特色的農家文化的重視，共同推動永續農業。

魚菜共生系統

本校商管學院循環經濟與綠色金融研究中心以魚菜共生系統的教學與研究價值為應用。魚菜共生系統結合水生動物排泄物與水中有機質，分解過濾成植物可吸收的硝酸鹽，供應給飼養箱上的蔬菜；同時，蔬菜根系能將水質淨化，供給水生動物使用。本校系所友會捐贈贊助本校建置魚菜共生系統，預計在淡水校區設置多點，並與課程結合，推廣循環經濟的觀念及作法，促進環境永續。

永續發展微學程

為持續推展環境永續，本校設置「永續發展微學程」，橫跨人文、社會、科技領域，開設「環境倫理」、「森林生態與樹木保護」、「生態社區建構」、「海洋科技」等課程，以提升學生對全球永續轉型重大議題的認知，奠定學生永續發展的意識及素養。

海岸濕地生態復育

USR 計畫淡水好生活響應扶輪社於淡海新市鎮海岸堤防公園綠地所舉辦的植樹活動，透過護植苗木，打造淡海複層綠地，連通公司田溪水岸與海岸的生態綠廊。透過此次復育行動，期望讓這塊土地早日能成為一片森林，還給生物一處賴以生存的棲所，彌補填海造陸所犧牲的海岸濕地生態環境。



目標 16.10

依據國家立法與國際協議，確保民眾可取得各項資訊，保障基本自由。

淡江行動一

世界公民教育課程

本校教育學院承接多項合作計畫，跨足公、私領域，如「學習領導下的學習共同體」、「世界公民教育工作坊」、「經濟弱勢

者工作未來工作坊」、「iEARN 國際專業教育知能工作坊」，長期與新北市政府及地區其他學校合作，進行新課綱課程，辦理教學研討會。其中，教育與未來設計學系教師與新北市多所中小學合作，並透過視訊與香港樂施會連線，共同推動世界公民教育課程，透過案例教學、議題教學、創新教學等課程及模擬演練，



帶領中小學生了解社會制度的運作，參與公共事務討論，進而培養學生分析、表達意見及作決定的能力。

2022 年相關活動包括：

1. 快時尚公開觀課議課：探討快時尚議題。
2. 石門實中公民行動課程教學成果發表會：探討原住民議題。
3. 新興國小公民行動課程教學成果發表會：探討極端氣候、疫情下弱勢族群的困境等議題。
4. 聖心小學成果發表會：探討疫情下經濟活動議題。
5. 忠山實小與仁國小公民行動課程教學聯合成果發表會。





SDG17：夥伴關係

目標17.16

透過多邊合作加強促進永續發展的全球夥伴關係，動員和分享知識、專業、科技與財務資源，支持所有國家、尤其是開發中國家實現永續發展目標。

目標17.17

以夥伴關係的經驗和籌資策略為基礎，鼓勵和促進有效的公共、公私營和民間社會夥伴關係。

2022年5月「五加二」產業產學聯盟簽約
淡江大學與12單位共推數位轉型與永續

本校與經濟部工業局平鎮工業區服務中心、嘉威聯合會計師事務所、中華民國資訊軟體協會、聯嘉光電、台灣檢驗(SGS)等12所企業及政府單位，共同簽訂「五加二」產業產



學產學合作意向書。淡江大學為因應政府創新的核心價值及永續發展的經濟模式，配合政府「連結未來」、「連結全球」與「連結在地」之策略與「五加二」產業創新計畫，邀請「五加二」產業企業代表，簽署產學合作意向書，以呼應政府推動的政策。未來將會協助輔導簽署企業，加速產業轉型與升級。

會中學術演講由本校經濟系教授許舒涵主講，主題為「Can cryptocurrencies be safe-haven assets for currencies during market crises?」；實務演講由工學院暨 AI 創智學院院長李宗翰、體育事務處體育長陳逸政及歐洲聯盟研究中心主任陳麗娟以自身經驗，分享「AI+數位學習在產業轉型與創新之應用」、「推動地方創生可行策略之研究—以淡水河休閒獨木舟為例」、「永續產業，邁向國際」。

在學術論文發表、產學交流座談方面，由本校水環系教授高思懷、歐盟中心主任陳麗娟與化材系教授張煖，分別以「企業永續發展」、「綠色供應鏈法」及「製程節能減碳」

為主題，進行永續發展相關技術成果報告；「2050 淨零排碳講座」由行政院能源及減碳辦公室科長黃錦明，分享更多臺灣淨零排碳的相關資訊。

2022年6月與遠傳電信簽署 MOU，共同打造「5G 元宇宙淨零碳排校園」

本校與遠傳電信簽署 MOU，共同打造「5G 元宇宙淨零碳排校園」，為台灣首家電信業者與大專院校針對元宇宙、淨零碳排兩大關鍵議題所達成的產學合作。「5G 元宇宙淨零碳排校園」MOU 目標是打造淡江大學成為永續低碳校園。淡江大學以「AI+SDGs=∞」為校務發展方向，將 SDGs 和世界公民意識理念融入教學、研究及校務發展。校務發展計畫重點工作兩大項目為雙軌轉型與永續發展，其中「雙軌轉型」最重要的基礎在於「數位轉型」，「永續發展」則可善用智慧科技加速增值達成目標。未來也將持續升級校園環境、教學內容，以及校務執行效率，堅定地朝 2050 年達到淨零碳排的承諾邁進。



參與會議活動，發揮永續影響力

2022年6月

2022年6月參與「2022 ESG 高峰會：環境、社會、治理」實體展覽，與國內永續發展、社會責任與公司治理等領域的標竿企業及學術機構，交流永續發展實踐及成果。本校參展主題包括：

大學社會責任—打造淡水淡江大學城：以台北都會區（包括台北市、新北市與宜蘭縣）作為實踐場域，投入在社會照顧、文化、教育、產業等領域的實踐。

學習分析系統：建置「學習分析系統」，追蹤學生數位學習足跡，提供授課教師與導師視覺化觀察工具，據以採取適性化教學及輔導策略，協助學生突破學習瓶頸。

AI 跨域與智慧創生：展現淡江大學 AI 創智

學院如何引導組織資源串聯、建立跨域合作渠道，發展融合人文與科技之跨領域 AI 應用。

2022年7月

國際暨兩岸事務處舉辦 2022 線上夏日課程「永續發展—台灣與世界」，安排一系列非同步課程及三場 Ms Teams 同步線上會議，邀請來自世界各地 20 多個國家，22 所姊妹校共同認識並探索臺灣，期待大家能夠有所收穫，並增進對臺灣的了解。課程內容包括經濟系系主任林彥伶「臺灣的勞動市場」、教設系系主任鄧建邦「臺灣未來學」、機械系教授楊龍杰「半導體微機電系統和微型無人機」、水環系教授李奇旺「臺灣淨零碳排路線圖」、化學系助理教授蔡旻燁「生活中的化學」、公行系副教授黃一峯「享用臺灣茶」及拉美所教授白方濟「臺灣和亞太地區的地緣政治」，從經濟、科技和文化的面向介紹臺灣的地理位置，經濟發展和未來前景，並且探討半導體產業的發展以及環境永續的議題。

參與 SDGs 政策制定

本校有逾百位教師在政府單位擔任顧問及委員，協助政府制定或推動永續發展目標相關政策；逾 70 名教師在非政府組織任職，協助推動永續發展。其中水環系教師擔任經濟部所屬台灣自來水(股)公司獨立董事、臺北市政府「臺北市災害防救專家諮詢委員會」委員以及經濟部「德基水庫集水區管理委員會」委員，推動政府推動水資源相關永續發展目標；土木、水環、運管等系教師協助行政院部會機關暨地方政府審查工程開發以及防災計畫；中文系和教育學院教師協助政府制訂並檢討中小學教育政策與工作成果；歐洲所教師擔任政府歐盟議題諮議並任勞資關係研究所諮詢委員；經濟系協助柬埔寨 NGO 組織 ECC School 建置魚菜共生系統；化學系教師協助政府開發新型抗腎癌藥劑以及生化處理技術。

SDGs 聯盟計畫

本計畫從 2019 年起以氣候變遷為地方 SDGs 聯盟主題，到 2020 年談論海廢議題的海岸行動，2021 年聚焦水資源的永續管理，邀集不同利害關係人及團體參與，形成地方意識，共同推動地方的改變。2022 年 3 月 19 日，聯合臺北市南雅扶輪社結合臺北滬尾扶輪社、淡水扶輪社與淡海扶輪社及淡水農業休閒協會，在淡海 255 地號土地，新市鎮海岸堤防公園舉辦植樹活動，淡水地區各級學校師生、熱心民眾逾 400 人參與，種下約 7,000 棵樹苗，希望結合在地力量，共同打造淡海複層綠地，連通公司田溪水岸與海岸的生態綠廊，修復海岸與流域生態環境。

落實 SDGs 教育

2022 年起開設 AI 與永續「特色雙塔」課程，以「AI 與程式語言」及「探索永續」各



1 學分的課程，納入新生校訂必修課程，協助學生認識永續發展，並透過學習 AI 人工智慧，因應未來發展。在「永續治理」的理念下，以永續發展與社會创新中心作為樞紐，協力全校各學院，以涵育本校「永續力」教育為標，開設「探索永續」課程，引導學生經歷社會覺察（social awareness）、社會參與（social participation）及社會創新（social innovation）之過程，豐沛「探索素養」、「永續素養」兩大核心素養，希望在大學養成教育中，培養出邁向未來的永續公民。同時開辦全校性 AI 技術與雲端服務課程，推動全校師生創新轉型，加速加值實踐 SDGs。

部門和非政府組織合作，由對口單位指定專題，而本校學生以國際實習形式進行專題執行與研究；後者則是與宜蘭縣之社區發展協會、新住民／移工團體、文史機構、原住民地區小學合作，實踐大學社會責任任務，並建構在地聯繫。

全球在地行動實踐計畫

本校推動「全球服務實習計畫」（Global Service Internship Program, GSIP）及「全球在地行動實踐計畫」（Global Action Practice, GLAP），前者為與東南亞及日本等國之政府

