National Taipei University of Technology
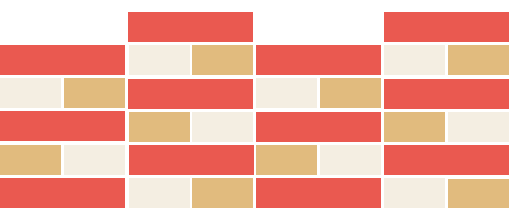
TAIPEI TECH

SUSTAINABILITY REPORT 2020

INTRODUCTION

Since the establishment of Republic of China, Taipei Tech has kept pace with systemic and industrial development and change. By continually renewing itself and playing a pivotal role in the cultivation of talent over the decades, Taipei Tech has propelled the development of Taiwan's economy.

Taipei Tech had started the responsibilities and spirits of social service in university education long before. Our school song expresses the purest mission in running a university:
"The industrial underpinnings of our school confer on us a profound duty To cultivate students who are the pioneers of engineering,
To draw out their expertise and teach them
To use both hands and minds with skill and dexterity,
and catch up with the use of one's livelihood. All these things are our responsibility.
The future of the nation is in our hands.
Let us strive for glory with all our hearts."

In 2015, the United Nations Assembly announced 17 Sustainable Development Goals (SDGs) in an urgent call for action by all humanity. We take it as our responsibility to contribute to efforts to meet these goals. By fully reaching out with our strong research capabilities, rich academic resources, solid industry-academia collaborations, and innovative, creative responses to international needs, Taipei Tech is able to connect social responsibility with globalization and put sustainable development into practice.

This report details our actions, contributions, and commitment to social responsibility in the dimensions of teaching, research, service, and management. Under our policy, which calls for a healthy, intelligent, green university; an innovative, broad-based learning environment; the nurturing of an all-around education; a pragmatic orientation in industry- academia development; in-depth learning and research via international exchanges; and an efficient, welcoming administrative team, we steer a course of sustainable management and exert our influence on society.

As we move into the future inspired by this vision, we look forward to taking action and collaborating with partners in various fields. Through fulfilling our social responsibility and SDGs, we can do our part to solve the multiple sustainable development challenges that humanity currently faces.

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End poverty in all its forms everywhere

STUDENT SUPPORT

Number of students : 13,852

22.36% of students receive school support for items such as tuition and miscellaneous fees. Subsidy items include:

1. Tuition and miscellaneous fees deduction
2. Disadvantaged student program
   (1) Grants
   (2) Expense subsidies
   (3) Emergency relief funds
   (4) Discounts on accommodations
3. Scholarships
4. Graduate Student Scholarships
5. Work-study grants

A total of 3,097 students have received one or more of the above subsidies.

The items of subsidy include:

- Various scholarships
- Tuition & miscellaneous fees deduction
- Graduate Student Scholarships
- Disadvantaged student program
  1. Grants
  2. Living grants
  3. Emergency relief funds
  4. Accommodation discounts
- Work-study grant
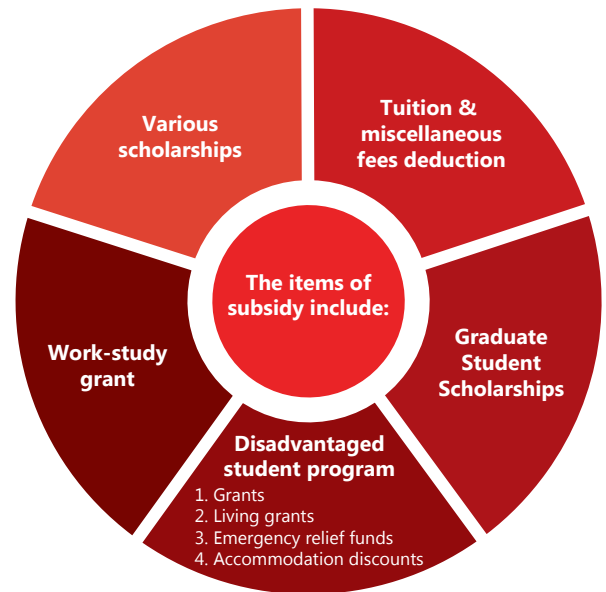
The proportion of the students who had received school subsidies is

22.36%

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Taking care of disadvantaged students and fulfilling our responsibility to ensure equality of educational opportunity and social justice continue to be central philosophical tenets at Taipei Tech. Taipei Tech provides a specific admissions quota for the bottom 20% of the household income group. Furthermore, since 2018, we have made a point of visiting remote areas to promote enrollment at our school. The school's guidelines covering travel subsidies for students wishing to enroll in the school were formulation especially to subsidize the transportation and accommodation expenses of disadvantaged students during the application process. Moreover, our graduate school waives registration fees and offers supplementary scholarships for low-income candidates to encourage students in the bottom 20% of household income group to enroll in Taipei Tech.

Reaching our registration goals:

Taipei Tech accepted two hundred and ninety-nine economically disadvantaged students in the 2019-2020 academic year, all of whom enrolled, for a registration rate of 100%.

Tuition and fee subsidies, scholarships, and grants:

Tuition and fees reductions for the economically disadvantaged students in the 2019-2020 academic year totaled 9.31 million NTD. Through the Higher Education Sprout Project, the University provided 12 separate mechanisms to support disadvantaged students (e.g., students from low-income families, disabled students, indigenous students).

Reducing the suspension/dropout rate:

The suspension/dropout rate for economically disadvantaged students in the 2019-2020 academic year was 6%. The University established counselling services to support economically disadvantaged students who applied for suspension or termination of studies.

Reaching the goal of increasing the graduation rate:

Originally, 58 economically disadvantaged students were expected to graduate in the 2019-2020 academic year; 18 of them graduated according to schedule, for a 31% degree completion rate.

Taipei Tech supports students from low-income families in their efforts to complete university via the following support strategies:

1. Tuition and fee deductions
2. Financial aid programs for economically disadvantaged students

    (1) Grants
    (2) Expense subsidies
    (3) Emergency relief funds
    (4) Discounts on accommodations

3. Scholarships and work-study funds
4. Higher Education SPROUT Project Scholarship Program: scholarships and tutoring services

Education is a strong driver of social mobility. With that in mind, Taipei Tech offers a broad range of financial aid, including scholarships and tuition waivers, for students from all backgrounds. In 2020, 32 degree-seeking students from seven low-income countries, (Burkina Faso, Ethiopia, Gambia, Haiti, Nepal, Tajikistan, and Yemen) enrolled in Taipei Tech. These students received monthly stipends in the amount of NT$6,000 to NT$30,000 as well as tuition waivers depending on their financial status and academic performance.

UNIVERSITY PROGRAMS AND SERVICES

Taipei Tech has initiated a variety of programs to assist economically disadvantaged students, such as reducing tuition fees, providing stipends, and offering student loans. In addition, as through the Higher Education Sprout Project, 12 types of financial aid incentives are provided. The University also provides further assistance and work-study programs for economically disadvantaged students.

Taipei Tech has set up counselling services for disadvantaged students who apply for suspension/termination of studies.

Advisors and department directors provide resources to support students with poor academic performance, and notifications are sent to the students and their parents.

Taipei Tech holds free on-campus English proficiency tests and subsidizes registration fees for off-campus English proficiency tests to help students fulfil the English proficiency requirement for graduation.

In 2020, Taipei Tech continued to promote the APEC program to help low-income countries emerge from poverty and achieve prosperity that provided local job opportunities to 6,800 Southeast Asian students. The Industry-University Cooperation Plan aims to help young students from emerging economies in Southeast Asia receive educational and vocational training. Additionally, in 2020, more than 1,500 students participated in the service learning program, and 33 social welfare organizations have signed contracts for service learning courses and assisted 361 students in obtaining scholarships.

UNIVERSITY-INDUSTRY COLLABORATION

Taipei Tech integrates research resources from industry, government, and the university, and partners with start-ups by providing campus space for them to use. Each year, we support the launch of over ten start-ups and organize over 30 courses to nurture companies participating in innovation and entrepreneurship competitions or exhibitions. We also provide professional consulting services more than 60 times per year.

Taipei Tech conducts a series of six-session (12-hour) entrepreneurship courses, including business planning and financial planning, each year, and links start-ups with KPMG accounting firm as a tax consultant, makes referrals to banks to provide financing and financial consulting, and assists start-ups through the GISA Board (Go Incubation Board for Startup and Acceleration Firms). Three firms have been recommended in the past three years, introducing Taipei Tech innovation achievements to Taipei Tech Development Inc., Shining Stars of NTUT Venture Capital Co., etc. to guide start-ups to obtain venture capital from the government. We also provide financial assistance to start-ups. For example, the Shengsen turnover growth rate in the past three years has exceeded 100% on average.

Taipei Tech has organized lectures, training sessions, and programs on CPR, catering and hygiene, quitting smoking, weight loss, blood pressure reduction, boxing aerobics, AIDS prevention. In 2020, About 3,603 people participated in 78 sessions. Taipei Tech has been promoting the University Social Responsibility Project for years, and organizes agricultural and food education lectures, exhibitions, marketing plans, and other activities to promote healthy living. We have hosted more than 17 sessions with about 900 participants.

In promoting Taipei Tech's University Social Responsibility (USR) program (the Indigenous Peoples Humanitarian Architecture and Agroecological Innovations Development Program), the school has organized nine agricultural food education seminars and promotional exhibitions to improve access to healthy and nutritious food and promote environmentally friendly agricultural vegetable products. A total of 103 teachers and students participated in these activities, and 253 local community members participated.

1

"Indigenous Tribe Safe Housing and Green Agriculture Promotion Plan"
Site: Shihlei Tribe (Jianshi Township, Hsinchu County)

Since March 2018, Taipei Tech has had an active collaboration with the Shihlei Tribe, located in Yufeng Village of Jianshi Township in Hsinchu County, for an ongoing project called the "Indigenous Tribe Safe Housing and Green Agriculture Promotion Plan." Taipei Tech is not daunted by the distance of more than 100 kilometers and has since shown enthusiasm toward main issues facing the tribe, such as safe housing and green agriculture, with multiple aims of achieving tribal rejuvenation and the sustainable development of nature and green agriculture as well as seeking solutions to domestic and foreign issues via a mutual exchange model in the long run. As Taipei Tech together with the Shihlei Tribe is partnered with a number of partners locally and overseas, a global educational network has been created and a USR training base has been formed too.

Working with Smallholder Farmers to Build More Friendly Sales Channels for Vegetables

Organic vegetables are grown in the area near the deep mountains surrounding Jianshi Township, and most of these organic vegetables have been officially certified.

The Atayal Shihlei Tribe has adhered to eco-friendly farming techniques out of respect for nature and their land over the past decades. This demonstrates their confidence and pride in their tribal culture. All that the smallholder farmers want is to develop eco-friendly agriculture and grow organic produce in a less polluted natural environment by integrating ecological knowledge and education about natural farming, ultimately creating agroecological symbioses in a healthy tribal environment.

In fall 2018, Taipei Tech's USR team started to collaborate with the Shihlei Agricultural Squad in the creation of a brand identity for the vegetables grown by the Shihlei Tribe. Their vegetables are named "the Shihlei Friendly Vege," which is the first vegetable brand named after the place where vegetables are grown. All the vegetables are grown by natural farming techniques and then carefully selected by smallholder farmers in the hope that consumers can have healthy vegetables on their dining table.

The USR team first created a Facebook Fan Page to reach customers and increase brand visibility. Relevant information could be uploaded regarding how to place an order, the main characteristics of each and every vegetable, and the profiles of the smallholder farmers in order to attract wider attention. The official website and a YouTube channel featuring some of the smallholder farmers were then made to let more people learn about how the Shihlei Tribe uses natural farming methods to grow healthy vegetables and how they are immensely proud of it. In addition to social media exposure, the USR team has also been committed to increasing brand value by simultaneously selling their organic vegetables in marketplaces throughout urban areas, developing a better cold chain system, and passing SGS tests.

A Beautiful Encounter Between Expertise and Practice: A Flipped Teaching Process in Localities

Equipped with years of working in humanitarian architecture and other construction experiences, Taipei Tech carefully reviews a range of problems concerning community services and public spaces within the tribe and then decides how to engage our students enrolled in our training sessions with the aim of helping indigenous young people return to their tribe and build their new homes. We hope that a better living quality may attract more tribal youths to return home. In April 2020, a group of students completed conducting a field survey, drawing a sketch, and creating a model and then presented a proposal called "Redesign of the Retreat House in the Prayer Mountain" to the tribal elders and church leaders. After an exchange of ideas, both sides agreed upon a shared vision for the design of a retreat house. In July 2020, a small market stall was built over Yulao Lookout. Five months later, "A Good Bargain Market Stall" was officially open, which boasts a wide array of agricultural commodities and a wonderful view for tourists to freely choose the vegetables and craftworks that they want while enjoying the natural scenery. As this has increased the visibility of smallholder farmers and boosted their sales, the farmers are now able to give back to their hometown.

The USR team also adopts the "flipped classroom" concept to inspire students, through efforts of the course lecturer and tribal people, to carry out a subproject. Any problems that students may encounter in the field are covered in the course syllabus so that students are given opportunities to learn by doing. Students are also encouraged to identify problems and present workable solutions to tribal people. The students will develop better cooperative communication skills, gain a clearer understanding of social issues, learn to fulfill their social responsibilities by using their specific specialties, and have more practical experience and problem-solving in the "learning by doing" process.

Cross-field Cooperation and Resources Integrated: Adding Value to Local Farm Products

Taipei Tech's great capacities in architecture, civil engineering, marketing, design, cold chain management, and effective interactions help its USR team to better leverage its expertise and experience to respond to societal needs. Students who take courses on professional practices are guided to help tribal people to resolve actual problems of locality by using different thinking methods borrowed from other disciplines and professions as well as innovative concepts and hands-on experience. The students then proffer a more creative operations model for local businesses. For instance, a tribe had been facing difficulties in storing agricultural products due to energy shortages. After the problem was defined through discussions, some tribal elders proposed a plan to re-build a cellar that their ancestors used to store a variety of foods. Then students who specialized in architecture, cold chain systems, and civil engineering were recruited to form a team to execute this subproject, in which teachers, students, and tribal people worked together to redesign and rebuild an Atayal smart cellar for food preservation. This smart cellar was built with composite building materials that were eco-friendly and moisture resistant (for example, soil walls were replaced with cement) and was installed with a humidity sensor and water facility for cold spring piping. Thus, a natural refrigerator that combined Atayal wisdom and modern technology was created.

The USR team also brings specialties together to add value to the brand. All seasonal vegetables grown in mountains are tested for pesticide residues (up to 380 types of pesticides) by the Taipei Tech Chemical Laboratory, which also checks the soil and water found in that area on a regular basis. The zero-residue results of testing for prohibited pesticides are strong proof of the higher value of alpine vegetables and are used as a marketing strategy. At the same time, the design and installation of a cold chain system have been implemented by one of our alumni-founded companies, which also provides consultation on cold chain logistics in order to carry out its CSR. This has remarkably reduced post-harvest losses during storage and the distribution process and has helped to keep the sales of alpine vegetables steady and profitable.

Sharing Indigenous People's Experience with Global Partners

Taipei Tech has joined efforts on facilitating sustainable development through academic exchanges over the past years with Chulalongkorn University, Kyushu University, Saga University, and Tokyo Metropolitan University. Issues have ranged from operating spaces at an ecovillage, youth architecture and design, soil and water conservation, and landscape restoration. It is worth noting that the Shihlei Tribe has been preaching the gospel to the Ibans, one of the Malaysian indigenous tribes, in recent years. This helps to facilitate exchanges of eco-friendly farming practices and sharing experiences between the two tribes. The Shihlei Tribe plans to compile relevant information about building the retreat house in the Prayer Mountain and sharing it with the Ibans so that in the future, they can co-create a vision about the use of public spaces. The introduction of eco-friendly farming practices has helped the Ibans to improve their everyday economy, and it is believed to be the starting point for a more wider introduction to other aboriginal tribes locally and abroad. Taipei Tech's USR team will continue to work with the Shihlei Tribe in the following main areas: "safe housing" and "better agriculture", with the aim of creating a more sustainable ecovillage and helping the tribe's social enterprises to succeed, in order to help the Shihlei Tribe be an example for other Austronesian peoples to look up to and emulate.

2 ZERO HUNGER

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

FOOD WASTE MANAGEMENT

In 2020, our faculty and staff totaled 15,606 persons, and total food waste was 32,903 kg, **an average of 2.11 kg/person/year**. Most was vegetable leaves and peeling produced during food preparation. This waste food was treated by recycling companies for use as pig feed, thus achieving the goal of zero food waste.

In order to avoid wasting food and support students in financial difficulties, the convenience stores on campus designated **fresh food to be sold at a 30% off discount for the final eight hours prior to the expiration** time and date. This helps reduce wastage of fresh food and creates value by helping those in need.

SUSTAINABLE, HEALTHY, AND AFFORDABLE FOOD CHOICES

In addition to certain specialty restaurants within the school that only provide vegan meals, other non-vegan restaurants in the school also provide a variety of vegetarian dishes and meals for teachers and students to choose from. Genetically modified products are prohibited for use as ingredients and only ingredients that have obtained the relevant government inspection marks are allowed. The use of processed products has been reduced to facilitate sustainable ecological development. In addition, the school's USR project executive team organizes regular group buying activities to buy natural, mountain-grown vegetables from local indigenous peoples, thus allowing teachers and colleagues in the school to purchase healthy and sustainable fruits and vegetables.

For food ingredients in the school's dietary regimen, priority should be given to local high-quality agricultural products certified by the central agricultural authority and those that have obtained government inspection certificates; in addition, the use of processed products should be reduced, and the use of genetically modified products should be prohibited to facilitate sustainable ecological development.

School caterers and food technicians provide healthy, safe, and nutritionally balanced meals with no genetically modified products cooked at reduced temperatures to preserve the original flavor of the ingredients, thus allowing teachers and students to choose from a selection of healthy, zero-burden foods.

Moreover, to provide our students with more affordable food, the school includes a section in the catering investment contract requiring manufacturers to give priority to hiring school students in work-study programs. Grocery stores provide fresh food discounts, and catering merchants provide special meals.

FOOD SECURITY AND SUSTAINABLE AGRICULTURE TRAINING

Out of 3700 graduates in 2020, none majored in sustainable agriculture and aquaculture.

As part of its USR program, Taipei Tech established a natural agriculture course in 2020 to train local farmers in knowledge and techniques related to natural farming, which is beneficial to environmental sustainability. A total of ten local farmers participated in the training course. Taipei Tech helped local farmers improve the quality of their work by opening its chemical laboratory to provide regular testing of the nutritional value of vegetables and soil composition.

To promote Taipei Tech's USR program "Indigenous Peoples Humanitarian Architecture and Agro-ecological Innovations Development Program", the school has organized nine agricultural food education seminars and promotional exhibitions in order to increase access to healthy and nutritious food and promote environmentally friendly agricultural products. A total of 103 teachers and students participated in these activities, and 253 local community members participated.

Ensure healthy lives and promote well-being for all at all ages

COLLABORATIVE PROGRAMS AND PROJECTS

In 2020 there were 3700 graduates, none of whom majored in health professions. However, Taipei Tech is an active participant in 91 programs promoted by local and global health organizations, and allows its professors to take on work in other institutions that directly involves health issues. In addition, Taipei Tech actively promotes cross-domain, cross-school alliances and inter-institutional (hospital) academic cooperation projects. We have contributed to the Ministry of Education's initiatives to assist talent in the domestic biotechnology and pharmaceutical industries.

Taipei Tech sets up health workshops and lectures on catering hygiene and nutrition, influenza vaccinations, AIDS and metabolic syndrome health screenings, smoking cessation support groups, and carbon monoxide screenings. Local community professionals, visitors, family members of faculty and staff, and retirees are free to participate.

Nicholas Prawirani and Guo Xin-Yuan, students in the Department of Industrial Design, designed a device called LIGHTAID that allows CPR to be performed more effectively

INFORMATION AND EDUCATION SERVICES FOR STUDENTS

Taipei Tech offers Cooperative and General Education Courses on health promotion and emergency care. We also organized a series of free lectures on AIDS and sex education. Information about such free events and services is be posted on the official website, news tickers, digital signage, posters, and leaflets.

The school provides free mental health services to our faculty and students. Students and faculty can make an appointment via the Consultation Reservation System. They can also call the Student Counseling Center or visit the center directly.
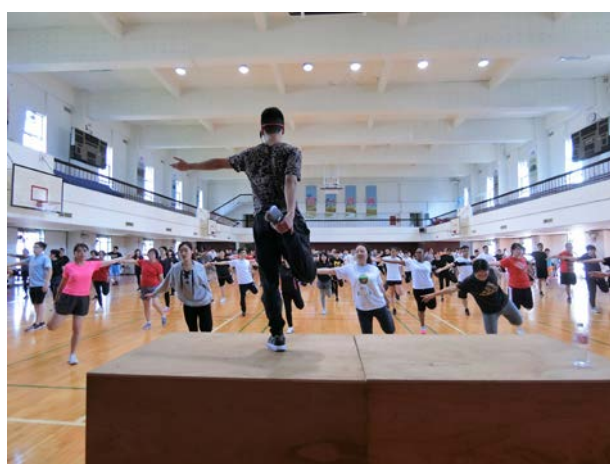
SMOKE-FREE POLICY

Taipei Tech, as a smoke-free university, has formulated the *Guidelines for the Prevention and Control of Smoking at National Taipei University of Technology*, and implements smoke-free policies in accordance with the guidelines.

3

"Young Entrepreneurs and Retirees Work Together to Create a Senior- friendly, Green-therapy Community"
Site: Da'an District, Taipei City

It is predicted that Taiwan will be a super-aged society by 2026, and Taipei City has the fastest aging population in the "six capitals." The ratio of the elderly population in Da'an District has reached 21.48%, and the ratio of seniors in Chenglong Vil. and Minhui Vil. is 29.93% and 24.92%, respectively. The two communities are adjacent to Taipei Tech; therefore, Taipei Tech architecture aims to take action to address the rapidly aging issue and create a senior-friendly environment through a USR Hub. Previously through the execution of USR practices in Mudan Township, Taipei Tech architecture provided professional knowledge such as architectural design and environmental psychology in consultation with the local health department for planning the construction of a health building as part of the Prospective Infrastructure Construction. This time around, Taipei Tech's USR team has decided to help their neighbors by working with the Village Office, elderly-friendly companies, and a long-term care team to proffer their assistance in Chenglong Vil. and Minhui Vil. Students are given the chance to communicate with the senior-friendly companies and the long- term care center in order to spread the "sustainable campus" concept to the university's neighboring communities.

A Shared Vision of Better Neighborhoods by Young Entrepreneurs and Retirees

At the initial stage of this project, students were divided into two groups for fieldwork. Each group was required to submit a report about community context. In this report, it aimed to identify problems specific to residents, release the results of a community survey, and present strategies and a better vision for community improvement, including share houses, daycare facilities, smart care centers, group homes, cafes for caregivers, senior-friendly shops, and living streets. The team also invited Taiwan's first horticultural therapist, Sheng-Lin Huang, to share his experience in promoting plant therapy with for a cross-field exchange and provide an opportunity to broaden the horizons of students while giving them useful advice about making attempts to connect with the communities. For students, this was vastly different from being assigned a topic on architectural design. They needed to do field studies, conduct on-site investigations, and interact with stakeholders before they drew sketches and created models. Communicating with stakeholders is very much like communicating with business owners. This prepares students for future scenarios when they enter architectural practice. The formulated project will be further modified upon reviews with industry insiders and professionals during mid-term and end-of-term classes. An architectural design that suits the seniors' needs and improves intergenerational exchanges will then be finalized.

The interactions between young entrepreneurs and retirees in communities enable students to better understand the needs of the elderly. An affinity diagram had been used to gather data and the shared opinions of community residents. A senior-friendly community plan was then finally presented after many explanatory meetings and rounds of discussions partaken by USR Hub team members and the residents of the neighborhoods. Based on mutual trust and kindness, residents were invited to attend a workshop hosted by therapist Sheng-Lin Huang. Through making floral tea and flower bento boxes, the elderly experienced more joy through the five senses and were more likely to learn about the effect of plant therapy endorsed by our team. Taipei Tech's planning for creating a senior-friendly, green-therapy community involves re- allotting unused spaces, building a living street called Kong Yen, and setting up a daycare center and share houses for elderly people. Within a budget constraint, Taipei Tech has planned a total of 12 therapeutic areas around the apartment complexes. The construction work is expected to start in the following year. In so doing, residents will experience the horticultural therapeutic effect within their apartment complex, and Taipei Tech's "eco-campus" concept will be realized in the near future.

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

QUALITY EDUCATION POLICY AND 1ST GENERATION STUDENTS

Taipei Tech complies with Article 4 of the Educational Fundamental Act of the Ministry of Education, which states that all people, regardless of gender, age, abilities, geographic locality, ethnic group, religious beliefs, political ideas, or social or economic standing, shall have an equal opportunity to receive an education. Therefore, there are no status restrictions on any academic activities held on campus. This policy was created in 1999 and reviewed in 2013.

A total of 27.76% of students are first-generation students. A total of 4,106 students are starting their first degree; 1,140 of these are first-generation students.

Policy created: **1999**	**Policy reviewed:** **2013**

EDUCATIONAL SERVICES ACTIVITIES FOR ALL

To promote lifelong learning for all, the Taipei Tech library provides free, high-quality educational resources for non-students. Alumni can use their alumni library card to enter the library. The library is open to the public to browse books and use the e-resources, with a limit of 30 visitors at any one time every day. Last year, 253 alumni applied for library cards. The library recorded 8,982 visits from alumni and the general public. Students of the Affiliated Taoyuan Agricultural and Industrial Senior High School of National Taipei University of Technology will soon be allowed to borrow e-books and also enjoy the library resources. New book releases, film premieres, and some art and cultural events are open to the general public. We have also held several film viewing activities in conjunction with the neighboring communities. At the same time, Taipei Tech invites professional teachers to continuously develop online courses in a range of fields using inter-school resources. At present, 23 online courses have been released, with 4,456 students attending, covering topics such as culture, language, and industrial automation. Online courses are promoted on social media to expand coverage.

Sending a movie appreciation event poster to the local chief to assist in promotion

Taipei Tech hosts speeches and seminars on a broad range of professional topics. The latest information on speeches and seminars can be accessed by the public on the school homepage.

Taipei Tech also conducts forums, seminars, talent cultivation courses, and vocational training activities on campus or in industry offices and factories to provide the public with knowledge and skills improvements in the workplace. The school has held more than 30 seminars in the past three years, and about 4-6 sessions/12-18 hours of training courses in the workplace every year.

Every year, the faculty members and students of Taipei Tech organize off-campus Volunteer Service-Learning Projects in local schools and remote communities. Over 1,500 students participate in Service-Learning Projects annually in conjunction with nearly 33 social welfare organizations.

In 2020, Taipei Tech organized 11 services teams during summer and winter vacation with 210 participants and 5,763 service hours.

4

"Sustainable Education in Gongliao - Preserving and Innovating Cultures"
Site: Gongliao District, New Taipei City

Taipei Tech faculty is dedicated to education in remote areas and has served Gongliao students through remote learning for a period of time. The faculty understand existing problems in the area's education system, e.g., high teacher turnover and inconsistent quality of education. Though technology is highly evolved, local students are not unfamiliar with phones or computers. That being said, the fact that Gongliao students are far removed from cities means that they have little exposure to art exhibitions, performances, cultural and creative parks, or Eslite bookstores. In other words, they still experience cultural deprivation.

To improve educational resources in Gongliao, Taipei Tech's USR team has designed a three-pronged strategy where they take stock of local cultural capital, cultivate a high-quality co-learning environment, and overturn local cultural capitals. The team aims to increase students' willingness to learn and deepen their cultural knowledge through innovating pedagogy, establishing tutoring systems for local students, and bringing Taipei Tech faculty and students into local middle schools and elementary schools to work with the schools and increase students' interest in learning.

Culture and Technology Transforms Learning Models

During the project's first year, the team collaborated with Gongliao Middle School and Gongliao Elementary School, putting together a team of teachers in different fields to develop a series of courses on cultural experiences and technology experiences. The team aims to transform theory into fun, hands-on experiences for local students through Taipei Tech to pique students' interests and offer them diverse knowledge.

For cultural courses, the USR team took stock of existing local cultural capitals and integrated local cultures and histories with university courses, such as Dark Room Art, Introduction to Religion, History of Literature, Communication Strategies and Practice of the Department of Cultural Vocation Development, to develop the blueprint workshop, real escape games, museum/tour guide training, and orienteering workshops. These activities educated students on related knowledge while strengthening their understanding of local cultures and histories. For tech courses, the USR team took advantage of its nature as a technology university, applying Taipei Tech's courses such as AR and Interactive Design, Mechanical Design, Computer Programming, Strategy Management to design AR/VR workshops, power car workshops, coin sorter programming design, and financial literacy through board games. By teaching through games and hands-on experiences, the USR team has helped students learn more efficiently.

The USR team also reached out to old districts in Gongliao, collaborating with the Gongliao District Office, Mu Mian Hong Association, and the Hsiao family of Jimu Mountain. Students from the Department of Cultural Vocation Development applied their expertise for tourism promotion, paintings of the old street, and video production to strengthen the cultural awareness of local communities and build strong, trusting relationships.

Achieve gender equality and empower all women and girls

RATIO OF WOMEN TO MEN ON CAMPUS

The ratio of male to female students at Taipei Tech is 7:3. To provide a gender-equitable learning environment and resources and to lessen the imbalance, the University periodically tracks the enrollment rate and the number of students who suspend/terminate their studies. Through this approach, the school attempts to maintain an equal graduation rate between males and females. Female graduation rates reached 27.84%, 26.31%, and 28.21% in the 2019, 2018, and 2017 academic years, respectively.

The university systematically measures and tracks women's application rates, acceptance and entry rates, and study completion rates at the university.

Application and acceptance rates of female students was calculated (not including applications followed by the Taiwan Joint Commission of Technological and Vocational College Admissions Committees). The qualification requirements for vocational high school students and college-prep high school students were considered separately. In 2020, 25.9% of the vocational high school student applied for Taipei Tech were female, and the acceptance rate was 26.9%. 28.5 % of high school students' applied Taipei Tech were female, and the acceptance rate was 41.7%. The results indicate that female high school students' application and acceptance rates are somewhat higher than vocational high school students. By tracking the enrollment rate and the number of students who suspend/terminate their studies, the University attempts to maintain an equal graduation rate between men and women. Female students' graduation rate was 27.84%.

Out of a total of 240 senior academic staff who teach, conduct research, or do both, 30 (12.5%) are women.

Out of a total of 1,065 female students embarking on degree studies, 276 (25.92%) are 1st generation students.

Percentage of women receiving degrees (by subject area):
1. College of Mechanical and Electrical Engineering, College of Electrical Engineering and Computer Science, and College of Engineering:14.18%
2. College of Management:48.87%
3. College of Design:61.39%
4. College of Humanities and social sciences:76.61%

PROGRAM AND POLICY

Enrollment at Taipei Tech's is conducted in accordance with Article 13 of the Gender Equity Education Act, which reads: "Educational institutions conducting recruitment or giving approvals for admission are not permitted to treat any prospective student differently based on their gender, gender traits, gender identity, or sexual orientation." As stipulated by the College Admissions Committee, our university departments have set the gender field on their application form as "not required." Furthermore, the graduate school Admissions Committee has an affirmative action policy for women applications and entry into the Graduate School, indicating that the applications does not tolerate gender bias against women.

Policy created: 2004	Policy reviewed: 2020

Strategies to ensure the success of female students

1. To provide a supportive learning environment and the necessary resources to ensure gender equality, Taipei Tech is committed to ensuring that the ratio of male to female students receiving scholarships is the same as the ratio of male to female students at the school (7:3). The student counseling center staff of counselors and psychologists (presently eight psychologists) are all female to protect gender rights.

2. In 2020, a total of 866 female applicants benefited from student aid programs, including tuition and miscellaneous fee reductions, programs for disadvantaged students, and so on.

3. Taipei Tech considers pregnant students' right to education to be a very important issue, and the counselors at the Student Counseling Center provide counseling services and related assistance to pregnant students.

4. Taipei Tech has implemented the following two skills building projects funded by APEC's Policy Partnership on Women and the Economy (PPWE) to address the issues of youth employability and digital upskilling of female students in our university:

   (1) The APEC Forum on Digital Innovation and Entrepreneurship (II): Building Capacity and Collaborative Connectivity for Women and Young Entrepreneurs (HRD 04 2019A)

   (2) The APEC Forum on Entrepreneurship for the Future of Work: Accelerating Regional Economic Recovery and Digital Inclusion for Women and Youth in the Post Pandemic Era (HRD 06 2021A)

5

Taipei Tech has implemented APEC projects that address the issues of youth employability and digital upskilling and innovative entrepreneurship for female students.

Taipei Tech vehicle engineering student Yang Ting-Yu won the gold medal in car painting in WorldSkills 2019.

Female talent cultivation program

To encourage talented women to enter the technology and engineering industry, Taipei Tech has launched basic programming courses as mandatory general courses. In addition, micro- programs related to Technology and Engineering were established in 2018, with a certificate of completion issued to students who complete the micro-program. According to the statistical results, 396 women completed the Artificial Intelligence Micro-Program and the Technology Micro-Program in 2020, and the number has increased each year.

Women's mentoring

In 2020, Taipei Tech held 1580 activities or mentoring sessions on gender equality, safety, energy, art, democracy, law, intellectual property rights, and tobacco hazards prevention. Over 75,485 participants attended the activities, and 35.44% of the participants were female.

Taipei Tech encourages students to form a cross-disciplinary community. Peer interaction inspires brainstorming and creates a diversified learning environment, and with additional support from the instructor, it increases learning effectiveness. In 2020, for example, there were a total of 144 cross-disciplinary community registrations; and the gender ratio (men to women) was 3:7.

Maternity and paternity policies

In accordance with statutory regulations on leave for teachers and public officials, our university grants our faculty and staff 8 days of prenatal leave, 42 days of maternity leave, and 5 days of paternity leave. Contract Employees are granted 5 days of prenatal leave, 8 weeks of maternity leave, and 5 days of paternity leave. Our university formulated its maternity leave regulations in accordance with the NTUT Campus Life Guidelines to ensure that students here can pursue their studies in complete peace of mind. In addition, NTUT provides nursing rooms and low-bed dorms for pregnant students to stay in.

WOMEN'S RIGHTS AND FACILITIES ON CAMPUS

Taipei Tech has signed contracts with many nearby public childcare institutions, kindergartens, and private preschools to provide a range of accessible, discounted, and affordable nursery facilities and schools for our faculty and students. Specifically, our university has contracts with daycare centers (Taipei Private Chiusan Preschool, Taipei Private Wesley Preschool, Mo Da Wei English Short-term Cram School, and the Hanzi after-school club) as well as with national kindergarten and childcare school chains (He Jiaren International Culture and Education: 41 kindergartens and 49 childcare schools nationwide; Happy Marian Kindergarten: 16 kindergartens and 14 childcare schools nationwide) to provide preferential enrollment in nursery schools and childcare schools.

Pursuant to the Regulations on Breastfeeding in Public Places, Taipei Tech has also set up a Breastfeeding Room on the first floor in the Second Teaching Building for breastfeeding mothers to breastfeed or pump milk. The Breastfeeding Room was used 280 times in 2020.

The right to prosecute and to be protected

1. According to NTUT's Guidelines for Student Appeal Procedures, if students believe that disciplinary action taken by the University is illegal or inappropriate, resulting in damage to their living, learning, or educational rights and interests, an appeal may be filed to the Student Grievances Committee. A total of four appeals were received in the 2020 academic year.
2. Our university handles the employment services of employees in accordance with the *Act of Gender Equality in Employment* and *Employment Services Act*. If the administrative measures or working conditions provided by the University are deemed inappropriate, employees may file for remedy pursuant to the provisions of the guidelines. The relevant rights protection channels for faculty use are also posted in the regulations area on the personnel office website.

Ensure availability and sustainable management of water and sanitation for all

WATER CONSUMPTION

We use the water bills provided by the water company to calculate statistics on monthly water consumption, report and review these statistics, and track improvements.

In 2020, due to the COVID-19 pandemic, the demand for clean water increased, so the water consumption increased slightly to 222,664 cubic meters. There are a total of 15,606 people in the school. Thus, the water consumption per person per year is 222,664 m3/15,606 persons = 14.27 m3/person.

In order to provide students, staff, and visitors with enough free drinking water, Taipei Tech has a total of 201 drinking fountains. Regular inspections and maintenance, filter replacement, and water quality testing are carried out on drinking water machines to maintain the safety of drinking water.

Each year, we set the previous year's water consumption as the standard and make an effort to control water consumption so that it does not exceed the previous year's consumption. We have also planted a variety of drought-tolerant plants on campus, including lantana, sugar cane, rhododendron, hanging baskets, spider plant, bougainvillea, unicorn plant, Chinese ixora, golden trumpet flower, Pengqiju (wedelia), butterfly orchids, etc. to minimize water usage.

WASTEWATER MANAGEMENT

Pursuant to a 2011 agreement with the Taipei City Government, except for wastewater from newly built buildings which are equipped with wastewater treatment equipment for self-disposal, the wash water used in the chemical laboratories on campus and the school's wastewater are piped into the Taipei City Government's sewage system for treatment at the sewage treatment plant.

To ensure that the wastewater discharged from laboratories meets Taipei City's wastewater quality standards and to fulfill our environmental protection responsibilities, wastewater treatment equipment is built in on the ground floor of newly constructed buildings such as the Everlight Building. Drainage from each laboratory is collected and treated before being discharged to the public sewage system.

WATER REUSE AND CONSERVATION

Many buildings are equipped with rainwater recycling systems to recover rainwater and underground water for landscape irrigation and the creation of ecological ponds and landscaping streams.

In 2020, 0.273% (608 m3) of the water used at the school was recycled (608 m3/222,664 m3 = 0.273%).

Lavatory faucets, toilets, and urinals must be certified water efficient. New recruit lectures and mentoring meetings are used to promote water conservation and correct water use concepts.

A number of professors in the school's Department of Architecture have assisted middle schools and elementary schools in promoting green campus projects, including implementing water conservation concepts. The Sustainable Environment and Green Building R&D Center was established to realize the concept environmental sustainability through the promotion of green buildings.

TRAINING PROGRAMS AND COOPERATION

The school's Department of Civil Engineering established the Water Environmental Research Laboratory to improve water resilience through ecological engineering and establish forward- looking water quality and quantity management programs.

With the growing awareness of the importance of environmental conservation to the health of our planet, water management has become an essential part of this cycle. Taipei Tech offers courses in this field including water resources engineering and planning, flood early warning systems, etc. to enhance our knowledge of water management, utilization, and planning, and in an effort to promote the sustainable use of this vital resource as well as the importance of environmental conservation.

Water Environment Research Center is a brand new research institution which was established in association with the Water Resources Agency (lead unit), National Taipei University of Technology, and the University of Virginia in the USA.

6 Taipei Tech's Water Environment Research Center and Water Lab have a long-term cooperation agreement with government on water security. In 2020, the center undertook a number of projects under the government, covering water quality improvements in reservoirs and the conservation and management of reservoir watersheds. The Water Lab focuses on water treatment to achieve the goal of water recycling. One Taipei Tech research team designed a "Water Box" for water level sensing and wastewater pollution monitoring that was selected for the second round of the 2020 Presidential Hackathon.

Ensure access to affordable, reliable, sustainable and modern energy

AFFORDABLE CLEAN ENERGY MANAGEMENT AND ENERGY USE

The energy (GJ) used per square meter of floor space of the university buildings in 2020 was about 19,425,140KWh/215,268m2 = 90.23 KWh/m2. Our school has adopted the Administrative Guidelines for Applying for and Approval of the Green Building Label and the Administrative Guidelines for Application Reviews, Approvals, and Use of the Smart Building Label as the basis for its energy-saving policy specifications for new construction.

**Policy created:
October 20, 2009**

**Policy reviewed:
April 20, 2020**

Each year, we develop a new energy-savings improvement plan. For example, in 2020, 370 energy-saving controllers were installed on individual air-conditioning units. The teaching and research building replaced old bulbs with 6230 energy-saving LED lamps. Many old air conditioners were replaced with new, high-efficiency air conditioners. For example, the 6th teaching building replaced 35 separate conditioners, the Hongyu Building replaced two window unit air conditioners, and the second, third, and fourth teaching buildings replaced a total of 108 air conditioners.
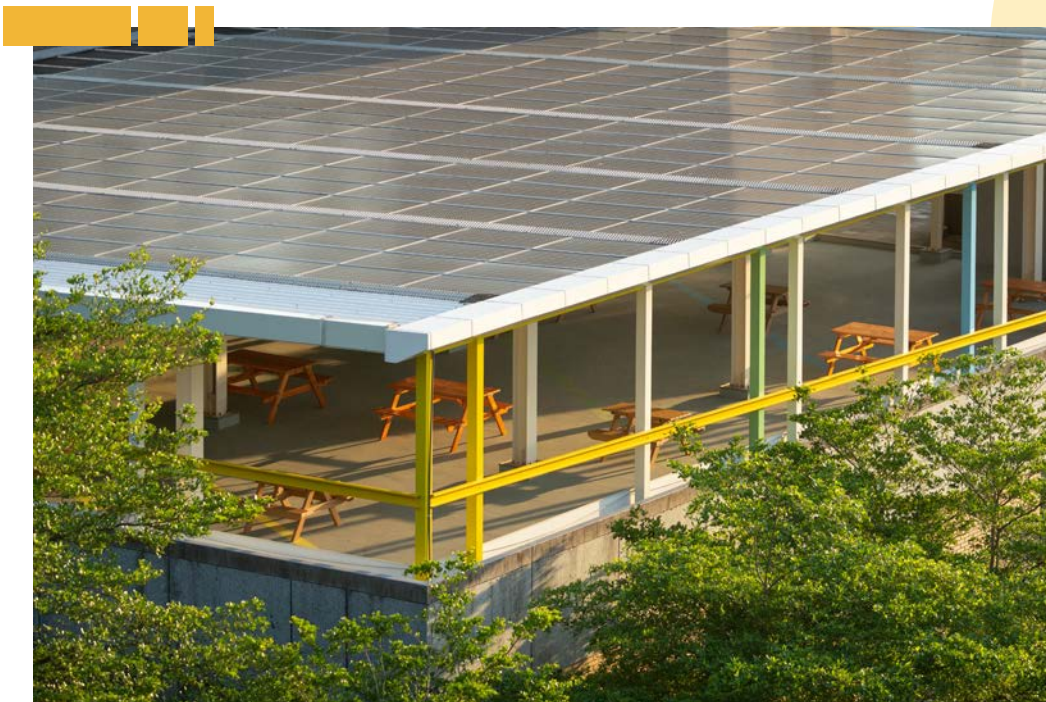
Solar panels installed on the roofs of certain buildings generated a total of 60,706 KWh in 2020. In 2020, plans were made to add 99 kWp solar panels on the roof of the library. The use and maintenance of official vehicles was strictly controlled to reduce gasoline usage and carbon dioxide emissions.

In accordance with the school's energy management measures, an energy conservation promotion group was established. The group meets regularly to set energy conservation goals and implementation plans, and supervises and evaluates the energy conservation goals and the formulation, implementation, and effectiveness reviews of energy conservation plans for all units of the school.

Energy wastage reviews are carried out by consolidating statistics on the electricity consumption data of each area's electricity meters, reviewing the areas with the highest energy usage, and formulating and implementing improvement methods.

The school held the 3rd meeting of the 2020 School Fund Investment and Wealth Management Mobile Group on September 23, 2020, and decided to make stock purchases in the Taiwan 50 ETF stock index fund as part of its investment plan. To buy 50 ETFs in Taiwan is to buy the top 50 listed companies in Taiwan's stock market. Overall, the major stocks in Taiwan's stock market are known for their Corporate Social Responsibility (CSR), so by purchasing this stock, the school can effectively withdraw investment in carbon-intensive industries, especially coal, coke, and oil.

| **Policy created: 2017** | **Policy reviewed: November 18, 2018** |

ENERGY AND THE COMMUNITY

Taipei Tech hosts more than 10 energy forums or lectures every year, including the Post- Coronavirus Era Sustainable Future Forum, the Circular Economy Course, lectures on building and air-conditioning energy-savings, etc. Approximately 43 courses are operated by the industry-academia cooperation program of the department of Energy and Refrigerating Air- Conditioning Engineering in the extension school. These courses allow students to learn about energy efficiency and clean energy. Sustainable energy mainly encompasses energy savings, carbon reductions, energy efficiency improvements, and clean energy technologies. In this context, Taipei Tech offers specialized courses and programs in conjunction with different departments to train outstanding professionals with exceptional energy management capabilities to develop sustainable energy policies in the future.

The school actively promotes green energy research and development. We are presently making an effort to incorporate research on energy-saving technologies, emissions reductions, clean technologies, electric power technology, energy monitoring, and environmental sustainability and green construction at the school. At present, we are also developing offshore wind power and maritime engineering operations and maintenance verification technology in a collaborative effort between industry, the government, and academia to build up Taiwan's domestic green energy infrastructure. In 2020 , we made plans to hold a series of wind power technology seminars.

Taipei Tech has undertaken an average of 30 research projects per year that are geared toward improving local industry's use of clean, efficient energy. In one of these projects, for example, we assisted AU Optronics Corporation to become a green enterprise that saved energy and reduced carbon emissions. We have provided assistance for offshore wind power that fosters and supports the low-carbon economy and set up a research center to achieve the goals of energy conservation and industrial transformation. In addition, during the decade during which Taipei Tech has conducted the New Taipei Industrial Park Project, we have been committed to continuously upgrading the industrial park. In recent years, we have worked hard to increase usage efficiency and intelligent manufacturing.

Taipei Tech supports the government's efforts to develop clean energy and energy-efficient technologies such as offshore wind power, smart energy saving, green energy materials, etc. We implemented the Bureau of Standards' offshore wind power project to introduce professional organizations to offshore wind power planning and design, and to gradually stabilize the offshore wind power supply system in Taiwan. We also cooperated with the Ministry of Education to execute the AI Cold Chain and Energy Decision-Making System Development Project to improve energy efficiency.

Taipei Tech is helping new enterprises to develop low-carbon energy technologies, including COZETA Energy Service Corporation's initiative to build an air-conditioning energy management system, U&U Engineering Inc.'s eco-friendly insulating materials and "green" cement, and a smart home appliance upgrade project conducted by one of our own professors along with other telecommunications engineers. For the circular economy, we promote non- polluting waste effluent recycling technology is an advantage for bio-metal working oil, and we advocates for biomass oil reduced consumption.

National Taipei University of Technology Energy Forums or Lecture Courses held in 2019-2021

Taipei Tech and BSMI hosted a symposium to discuss the regulations and technical requirements pertaining to offshore wind power development in Taiwan

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

UNIVERSITY EMPLOYMENT PRACTICE

Our university supports the ideology of a sufficient salary to meet basic living needs, and pays employees in accordance with the Teacher Remuneration Act, Civil Service Pay Act, and National Taipei University Remuneration Criteria for Contract Employees. Our university convenes labor-management meetings in accordance with the Labor Standards Act and the Regulations for Implementing Labor-Management Meetings. The president of the university designates eight employees as representatives of management, and the employees (including women and foreign employees) elect eight employees as labor representatives in a secret ballot. Each meeting is jointly chaired by representatives of labor and management. Meetings are held every three months to promote the exchange of opinions between labor and management so that all may benefit.

In accordance with the *Act of Gender Equality in Employment* and the *Employment Services Act* and other regulations, our university does not discriminate against faculty and staff members due to race, religion, gender, sexual orientation, or age in recruitment, screenings, performance appraisals, promotions, remuneration, retirement, resignations, and dismissals.

According to the school's *Directives for Faculty and Staff Overtime Work* and *Work Regulations for Contract Employees*, employees shall not work more than four hours of overtime in any given day and 20 (or 46) hours per month; an overtime or make-up leave application can be filed after working overtime. No act of forced labor/slavery or child labor shall be tolerated in our university.

Outsourced labor at our school includes cleaning company personnel; their primary work involves the cleaning and maintenance of restrooms and public areas. Since May 13, 2011, Article 8 of our contract with such companies has stipulated that the working conditions of employees of the successful bidders must comply with the provisions of the Labor Standards Act. According to the school's 2020 restroom and building cleaning and maintenance contract requirements, the employment, salary, insurance (including insurance required by all relevant laws and regulations), employee benefits, and personal safety of cleaning staff and their supervisors shall be the responsibility of the winning bidder. Salaries must comply with the provisions of the Labor Standards Act, and the winning bidder shall pay a monthly salary of at least 26,000 NTD (higher than required by the *Labor Standards Act*). If it is necessary to work overtime, the manufacturer shall comply with all relevant regulations such as the *Labor Standards Act*.

**Policy created:
May 13, 2011**

**Policy reviewed:
None**

In accordance with the provisions of the *Act of Gender Equality in Employment*, employees at our university shall not be offered unequal salaries due to gender or sexual orientation; employees who occupy the same job or rank shall be paid the same salary. However, salary differentials based on seniority, rewards and punishments, performance, or other legitimate reasons not based on gender or sexual orientation are not restricted by this act.

The university does not discriminate against faculty and staff members due to gender or sexual orientation in terms of salary. Annual evaluations are conducted at the end of each academic year, and salary notifications are issued together with the salary scale based on the assessment result. If staff members and other employees wish to dispute the evaluation results, they may file an appeal pursuant to regulations.

In accordance with the provisions of NTUT's *Guidelines for the Establishment and Review Process of the Faculty Appeal and Review Committee*, if staff consider their salary payment, job allocation, promotion or performance appraisal, or other working conditions provided by the university or university administration to be inappropriate to a degree that damages their rights and interests, they may file an appeal.

8 EXPENDITURE PER EMPLOYEE, STUDENTS TAKING WORK PLACEMENTS, AND EMPLOYEES ON SECURE CONTRACTS

Employees include all academic and non-academic staff working for the university. **In 2020, there were a total of 1,754 employees,** and the expenditure per employee was NT$ 926,759. So, **the total university expenditure in 2020 was NT$ 1,625,535,992.**

n 2020, there was a total of 13,852 students at the university, 1,194 of whom had work placements for over a month. This number includes students on outbound placements, meaning that students working abroad for a year as part of earning a language degree were also considered to be on work placement. This may include unpaid placements, although there are ethical and equality issues associated with this practice.

Out of a total number of 1,754 employees in 2020, **1,189 employees who had been employed for over 24 months. Thus, 68% of employees were on secure contracts.** Permanent or rolling contracts without a fixed term are considered to be of more than 24 months duration. The focus of this metric is employment that is short term and therefore less stable. This excludes:

• Short-term contracts that are explicitly to cover maternity leave
• Part-time teaching staff serving as guest lecturers for only a few lectures and visiting scholars, if they retain their employment rights in their original institution.
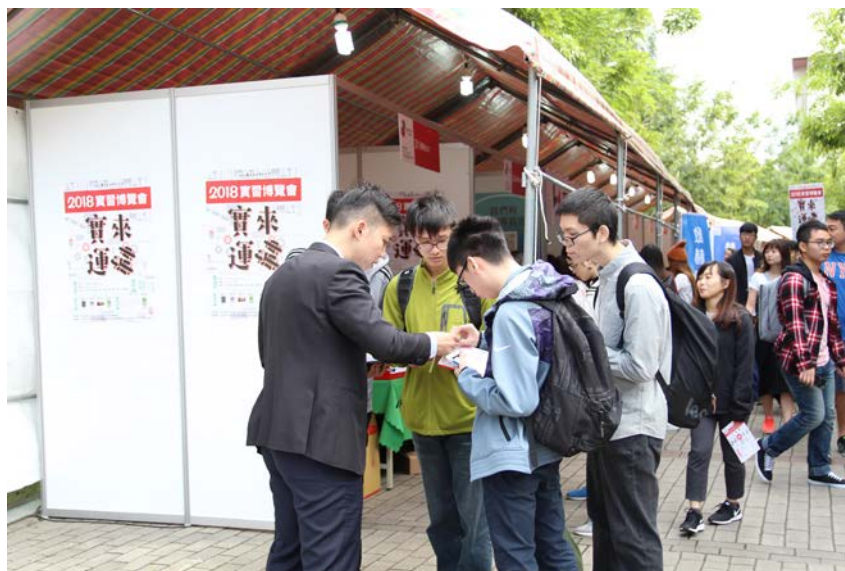
Student Intern Fair is held annually on the Taipei Tech campus

Build resilient infrastructure, promote sustainable industrialisation and foster innovation

UNIVERSITY SPIN-OFFS

Another measure of a university's innovativeness is the creation of new companies directly from the research at the institution. University spin-offs are defined as registered companies set up to exploit intellectual property that has originated from within the institution. They must have been established at least three years previously and still be active.

Number of university spin-offs:

| Year 2018 16 companies | Year 2019 11 companies | Year 2020 10 companies | Year 2021 7 companies |

RESEARCH FUNDING FROM INDUSTRY AND COMMERCE

Funding the university has received from industry or commerce during 2020 specifically for research purposes (by subject area).

Research income from industry and commerce (2020):

- Research income by subject area

| STEM NT$ 505,479,060 | Medicine NT$ 17,015,513 | Arts and Humanities / Social Sciences NT$ 27,288,429 |

- Number of faculty (2020): 516

"Faculty" refers to staff employed in an academic post; e.g., lecturer, reader, teaching professor and or researcher.

Number of faculty members by subject area:

| STEM 348 | Medicine 0 | Arts and Humanities / Social Sciences 168 |

• Research income from industry includes income received from industry or other commercial bodies. Research income from industry and commerce per faculty member (2020) by subject area:

STEM NT$ 1,143,617.8	Medicine NT$ 38,496.6	Arts and Humanities / Social Sciences NT$ 61,738.5

Taipei Tech Innovation and Incubation Center Won The 17th National Innovation Award in 2020

"Smart IoT Sensors for Fish Farming - Applied in Kouhu Township, Yunlin"
Site: Kouhu Township, Yunlin

Polyculture is the most common fish farming approach in Kouhu Township, Yunlin. Hard clams, milkfish, and shrimp are farmed in freshwater and saltwater ponds, with each hectare yielding NT$500,000 in annual output value. Local businesses have also worked hard to transform the Taiwanese tilapia, a species developed in Taiwan in 1991, into a local specialty. Evolving times and environments have imposed increasing limitations on traditional fisheries from land and human behaviors, challenging the industry's growth and development. Meanwhile, Kouhu Township also suffers from a reduced labor force, an aging society, and worsening environments, all of which threaten the traditional fishery industry.

Over the past decade, the old-age dependency ratio has exceeded the young dependency ratio in Kouhu Township as the town trends toward an aging society. Many children move away from Kouhu for school, resulting in labor shortages and fewer people to inherit local businesses. On the other hand, EPA data show that Yunlin County has had the highest PM2.5 levels in Taiwan over the past few years. Severe air pollution has resulted in poor quality of life. Fish farmers have pointed out that many grey mullets suffer from sudden deaths and that their farms are affected by oil pollution. Poor water quality at fish farms and sudden environmental changes, e.g., heavy rainfall and low temperatures, have caused fish to die in bulk and fish farmers to suffer financially. Taipei Tech's USR Hub team aims to help fish farmers respond to these challenges.

Interdisciplinary Team Introduces IoT Sensor Solutions

In 2020, the Department of Computer, Department of Chemical Engineering, and Department of Business Management formed a USR Hub project team, which established the project "Smart IoT Sensors for Fish Farming - Applied in Kouhu Township, Yunlin." The USR team, including faculty and students, traveled to Kouhu Township, Yunlin, hoping to assist local fish farmers in developing local industries with their technological expertise. The team decided to collect and analyze big data and set up AI intelligence to fight against the worsening fish farm environments of Kouhu Township. They also aim to increase hard clam yield and encourage local youths to return for fish farming through technological fish farming approaches.

The Department of Chemical Engineering team first applied their expertise to interpret and analyze data on water quality. The Department of Computer then installed communications equipment and remote-control modules. The equipment sends sensor information to fish farmers to remotely monitor oxygen saturation, saline, redox potential, acidity, and water temperature. Alerts from the system allow fish farmers to act accordingly. Fish farmers can also access historical data for comparison and further optimize the fish farm for higher yields. Data indicate that the introduction of IoT sensors has helped local fish farmers save 20% from labor expenses. The IoT sensors are also a foundation for future technology transformations as fish farmers can install automatic feeding systems, growth monitor systems, and quality control systems in addition to sensor systems.

Digitalization and Fish Farming Education to Build Local Identities

A team of faculty and students from the Department of Business Management traveled to Kouhu Township to understand local needs and local specialties with business potential. While collaborating with the local Community Development Association and local schools, the team realized that information updates are few and far between in remote areas. With fewer educational resources, the students in Kouhu Township are suffering from a widening digital gap. The faculty and students worked with local elementary schools for a course on digital technologies, e.g., video editing, social media, and drones, that could be applied to promoting local specialties. Alumni associations also raised funds to reorganize an unused fish farm and hire a local fish farmer to educate local students. The aim is to teach students about fish farms unique to their hometown and help traditional fisheries develop with technology.

In the face of the many challenges posed by modern society, interdisciplinary teams are critical. The smart fisheries team applied their expertise and were able to contribute significantly to local industries and schools. The team hopes that their experience can produce a scalable paradigm to continue supporting local fish farmers with technology transformations.

Reduce inequality within and among countries

1ST GENERATION STUDENTS AND STUDENTS FROM DEVELOPING COUNTRIES REPORT

A first-generation student is one who reports that they are the first person in their immediate family to attend university at any level (note - the individual may have studied at another university previously).

The proportion of 1st generation student is 27.76%. In 2020, a total of 4,106 students were starting their first degree, 1,140 of whom were first-generation students.

A total of 1,192 international students from low or lower-middle income countries (as defined by the World Bank) received financial support to study in 2020.

These students receive financial aid that significantly supported their studies, including tuition and fees, housing and living costs, and study materials.

PROPORTION OF STUDENTS AND EMPLOYEES WITH DISABILITIES

"Disabilities" can be defined to include only impairments, or impairments and activity limitations, or impairments, activity limitations, and participation restrictions (as defined by the International Classification of Functioning, Disability and Health), thus providing a standard language and framework for the description of health and health-related states.

Out of a total of 13,852 students, 47 (0.34%) had disabilities.

Out of 1,754 employees in 2020, 61 (3%) had disabilities.

UNIVERSITY NON DISCRIMINACY POLICY AND PLAN

According to Articles 3 and 6 of Taipei Tech's Academic Policy, restrictions on admission to university departments is are limited to academic qualifications. In line with the Taiwan Joint Commission of Technological and Vocational College Admissions Committees, the departments at the university do not require the "gender" field to be filled in. In addition, the application guide uses non-discriminatory terms in compliance with the Convention on the Rights of Persons with Disabilities (CRPD). Furthermore, to implement a non-discriminatory policy, the Taipei Tech Graduate School Admissions Committee has approved a policy requiring that applications have no gender or race requirements.

**Policy created:
2004**

**Policy reviewed:
2020**

In 2020, Taipei Tech's five-year junior college and university had a combined admissions quota of 105 disadvantaged students, including 55 indigenous students, 19 economically disadvantaged students, 25 students from outlying islands, and 6 disabled students. 38 students enrolled through these quotas. In addition, 33 economically disadvantaged students and 1,654 female students applied for admission to the school's research institute; 13 economically disadvantaged candidates and 419 female students were admitted. A total of 976 disadvantaged students enrolled in 2020.

Taipei Tech attaches great importance to the rights of disadvantaged students. To ensure that such students have equal opportunity, we plan to offer additional admissions quotas for disadvantaged students, including economically disadvantaged students, students from outlying islands, indigenous students, and students with disabilities. Furthermore, one responsibility of annual committee meetings is to track disadvantaged students and encourage all departments to increase enrollment quotas. Our recruiting policies comply with all applicable laws and regulations, and our recruitment information is transparent to the public. The school welcomes disadvantaged students to participate in recruitment. We have hired staff from a range of backgrounds. Taipei Tech has recruited 61 staff members with disabilities and eight indigenous people in compliance with Article 38 of *the Law on the People with Disabilities Rights Protection Act*.

UNIVERSITY SUPPORT SERVICES TO COMBAT GENDER DISCRIMINATION

Our university has set up the Gender Equality Education Committee as a platform to promote gender equality education and accept cases related to the Gender Equity Education Act. In accordance with Executive Yuan regulations, the university conducts five hours of democratic governance value courses annually for faculty and staff (including gender mainstreaming, integrity and service ethics, human rights education, administrative neutrality, multiculturalism, citizen participation, etc.).

Taipei Tech offers mentoring, counselling, scholarships, peer support, and the Jade Project for disadvantaged students, including 12 guidance and subsidy mechanisms, to assist them in fulfilling their academic and daily needs. In 2020, 1551 disadvantaged students received financial aid from the Jade Project. More than $10,666,400 NTD was granted to those students. In addition, we provide mental, health, and legal counselling services to our underrepresented staff and faculty to meet their needs.

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After years of continuous improvement, our current campus and all buildings have barrier- free facilities that comply with laws and regulations, providing a barrier-free and friendly campus environment.

Supported by the Higher Education SPROUT Project, Taipei Tech offers the Jade Project, which provides tutoring and mentoring programs for disabled students who have poor academic performance. We hire top students or graduate students to serve as teaching assistants and arrange individualized remedial learning programs for disabled students. The Resource Classroom of Taipei Tech provides peer support to disabled students according to their individual needs to assist in their everyday lives and learning, including transportation assistance for those with physical disabilities and simultaneous listening and typing assistance for hearing-impaired students in class.

Taipei Tech provides mentoring and consulting services to people with disabilities, including evaluating their special educational needs and formulating individualized support plans. We evaluate students' physical and mental status, analyze their personal abilities, assess their academic and life needs, and plan and implement support strategies to meet their needs.

To properly manage the dormitory application process and quality of life, Taipei Tech has formulated reasonable accommodation policies and regulations, including priority application for disabled students. Taipei Tech provides barrier-free, disabled-friendly dorms. Students with accessibility needs can request for barrier-free accommodations in accordance with the *Operational Directives for Barrier-free Accommodations in NTUT East Dormitory*.

Make cities inclusive, safe, resilient and sustainable
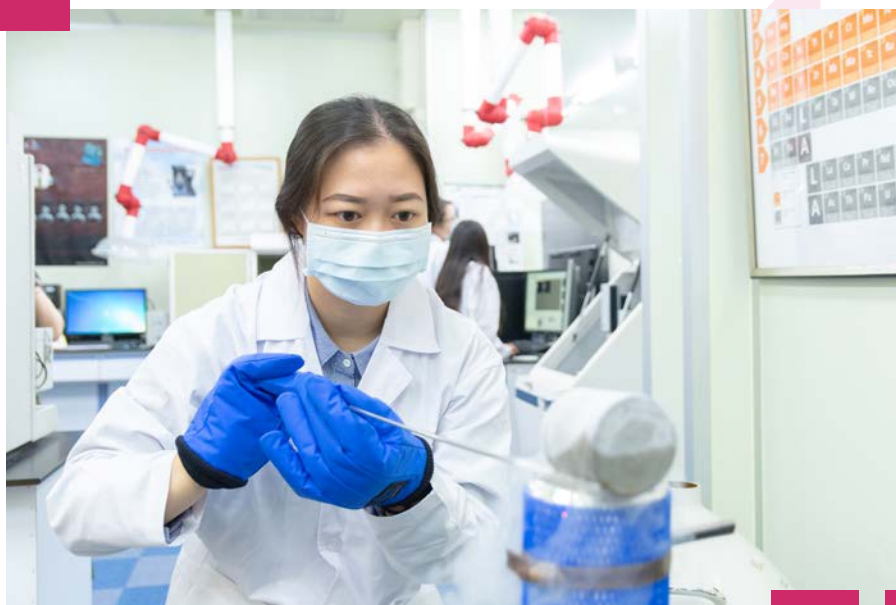
UNIVERSITY SUPPORT OF THE ARTS AND HERITAGE

The school is an open campus in which the Arts and Culture Center and the Red House (city-designated historic sites) are open to the public during working hours (every Monday to Friday from 9 am to 8 pm; during winter and summer vacations, Monday to Thursday from 9 am to 5 pm). The Red House, located on campus, is a Taipei municipal monument. The campus also hosts the Taipei Tech history gallery, which houses exhibits showcasing NTUT's history through the Japanese era and more recent reformations. Both spaces are infused with cultural richness and are open for guest visits and booked guided tours. Due to the Covid-19 epidemic, there was restricted access to campuses in 2020, and the number of visitors was much reduced. However, in 2020, a total of 167 people from outside organizations applied for the guided tour service. In addition, there was a total of 4,930 individual visitors to the Red Mansion in 2020.
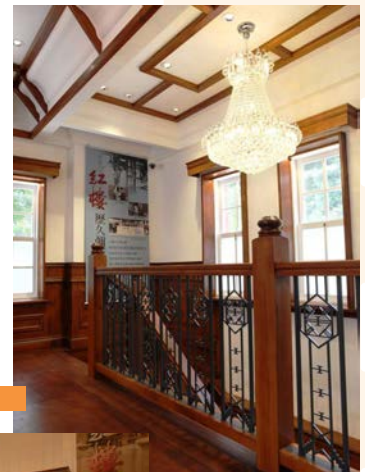
The university provides public access to our library, and allows 30 members of the public to enter the facility simultaneously to access the library's services with their ID cards kept at the counter every day. Last year, there were 4,243 such visitors. We also provide guided tours to non-students, but this service was suspended last year due to COVID-19. Meanwhile, as a member of the Interlibrary Cooperation Association, we provided 338 other members with public access to our library's books and publications. Therefore, our library has been awarded first place in the Outstanding Performance in the National University of Science and Technology Interlibrary Collaborative Services for two consecutive years (2019 and 2020), and provided services in a total of 647 cases.

NTUT won the award for outstanding performance in interlibrary cooperation services

With over a century of history, Taipei Tech has many sites of historical significance on campus, such as the Taipei Tech Archives and The Red House. We also have an Arts and Culture Center to exhibit artworks and hold artistic activities. As an open campus, the above-mentioned sites, exhibition center, and works of art are open to the public free of charge.

The main green spaces on campus are located on either side of Zhongxiao Road, on either side of Xinsheng Road, behind the second teaching building, and next to the Civil Engineering Building, Materials and Resources Building, and Common Science Building. The stream that runs between Zhongxiao East Road and Bade Road helps beautify the campus landscape. Public spaces and green spaces are provided in the school for public recreation and use.

Taipei Tech Arts and Cultural Centre is a gathering place for those interested in the arts and culture. We hold regular exhibitions of different forms of art, including musical performances, and incorporate aesthetic values into technology so that they become part and parcel of the daily life and education of our students. Taipei Tech values the integration of the humanities and technology, and the improvement of students' leadership and organizational skills. Every month, we invite artists from different cultures to put on choir, theater, and chamber orchestra performances for our students. We also have eight music clubs. Each club holds three to four public performances every semester. In 2020, we offered more than 30 public art performances and 29 music and dance events that were open to the public.

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Since its founding in 1912, our school has systematically preserved and recorded three important aspects of its cultural heritage. First, our school's historical and cultural relics are recorded and placed on display in our special collections room. In 2020, we held a school history exhibition titled Looking Ahead by Building on the Past: Origins of NTUT's Architecture Education. As our school was the first to teach architecture in Taiwan, the Department of Architecture, established during the Japanese colonial period, is of great historical significance. We have also restored the Red House and the historic corridor. The former was restored to its original appearance and reopened in 2017. Even as small exhibitions and guided tours continue to be organized at the Red House, it has passed the Ministry of Culture's preliminary review of the 2019 Historical Site and Building Management and Maintenance Evaluation. The historic corridor will be developed into an arts and culture park on campus.

Furthermore, Taipei Tech is committed to preservation and cultural heritage recording and research projects at other local institutions. Twelve such projects were carried out in 2019 and 2020. Additionally, Taipei Tech assists the Ministry of Education in promoting the development of cultural and creative industries and talent cultivation in Taiwan. Taipei Tech provides assistance for start-ups such as Green Read Vision that record and/or preserve Taiwanese stories so that we will never forget our local folklore, traditions, language, and knowledge.

Cultural and Creative Product-Service Design for Sustainability of Cross-Strait Ethnic Minorities: A Case Study of the Thao in Taiwan and Yao in Northern Guangdong is a research project that focuses on the concept of sustainability in the cultures of the Taiwan's indigenous Thao people and mainland China's Yao ethnic minority. A Taipei Tech research team conducted field surveys and ethnographic research to build a database of the features of their cultural artefacts. This project resulted in the building of a cultural sustainability database for specific ethnic minorities in Taiwan and northern Guangdong, and the development of a series of cultural and creative product-service designs that support the cultural sustainability of ethnic minorities. Another research project, Causative Verbs in Amis and Puyuma and their Lexicographic Treatment, has led to a better understanding of both typical and extended functions of formatives from both synchronic and diachronic perspectives. The next phase of research will be the proper implementation of remarks and instructions regarding these causative markers in pedagogical materials. It is hoped that this line of research will contribute to Formosan language lexicography.

The school also incorporated the University's Social Responsibility (USR) program into cross- school community exchanges to enhance social practice and local creative energy, and held the University x Tribal Sustainability Power event in 2020. This event focused on cooperation between university students and indigenous tribes, who worked together to promote the sustainable development of indigenous peoples.

The opening ceremony of the school history museum on October 30, 1999 (left). Red House restoration ceremony on May 23, 2017 (right)

Long-term funding has been invested in the renovation and maintenance of the historic Red House: 2017: NT$ 13,636,759, 2018: NT$ 600,000, 2019: NT$ 700,000, 2020: NT$ 720,000. In addition, in 2020, NT$ 3,500,000 was invested into renovating the music exhibition hall.

UNIVERSITY SUSTAINABLE PRACTICES

Because Taipei Tech is located in the city center, public transportation is very convenient. We encourage our students, staff, and faculty to commute to school via public transportation as a sustainable practice. The total campus population is approximately 20,000 people, but we only provide 161 vehicle parking spaces and 1201 motorcycle parking spaces. 93.2% of the campus population commutes to school on foot, by bike, or on public transportation and shuttle buses. As a target, we plan to reduce the number of parking spaces each year.

Taipei Tech is located in the city center right next to bus stops, an MRT stop, and U-bike stands. Accordingly, we encourage faculty, staff, and students to use sustainable commuting. Our student and faculty ID cards are combined with EasyCards. Students and faculty members who use their ID Cards to take public transportation receive discounts on the fare. In addition, we provide free bicycle parking spaces and electric vehicle charging stations on campus.

Electric vehicle charging station

Free bicycle parking

11 NTUT has formulated its Rules for Staff Working from Home to implement remote office work under special circumstances. Furthermore, in accordance with the Act of Gender Equality in Employment, faculty members may request that the school reduce their working hours by one hour each day so that they may care for their children under the age of three years.

Though Taipei Tech is located in the city center, we provide our students with very reasonable and affordable housing near the main campus. In addition, underrepresented students are offered priority application, discounted rental rates, or free rent.

To ensure the safety of teachers, students and staff, pedestrians are given priority on all on- campus roads. According to the Article 5 of the school's Campus Traffic Management Measures, vehicles entering the campus and parking lot must obey all signs, follow the commands of the school guards or management personnel, and drive at a speed limit of 15 kilometers/hour. To reduce the amount of driving on campus and lessen the impact on pedestrian traffic, our school has 10 parking spaces next to the Zhongxiao entrance gate and 15 temporary parking spaces between the Civil Engineering Building and Materials Building at the Xinsheng entrance gate. There are guard rooms at the school gates where police or security are stationed to control traffic entering and exiting the campus. The parking of cars, motorcycles, and other vehicles is prohibited anywhere on campus except for the designated parking areas. Newly-constructed buildings are in compliance with the government's *Administrative Guidelines for Applying for Approval for Green Building Labels and Administrative Guidelines for the Review, Approval, and Use of Smart Building Label Applications*.

Throughout our long history, the school has made a concerted effort to maintain the campus environment. Therefore, the university has no abandoned or contaminated land. Professors from Taipei Tech have worked with 19 central or local government bodies, including the Ministry of the Interior, the New Taipei City government, the Taipei City government, and the Keelung City government, as members of urban design/planning and land-development-use plan screening committees, providing the government with recommendations to achieve housing justice. Taipei Tech is committed to assisting local authorities in addressing planning and development issues. A total of 17 projects were implemented from 2020 to 2021.

"Empowering Ceramics - Local Revitalization in Yingge"
Site: Yingge District, New Taipei City

Yingge has often been touted as the ceramics town of Taiwan. The art of making ceramics intentionally antiquated was a testimony to Taiwan's significant cultural value. The artistry contributed to local industries in the past. Still, as times have evolved, the traditional artistry in Yingge has become stagnant in its growth and development. Challenges with passing down this artistry, a lack of branding, an inability to apply ceramics to daily life, and a lack of support have diluted local ceramics culture. Even residents are finding it harder to resonate and identify with ceramics arts. The market has also entered a vicious cycle as products are growing increasingly similar to each other.

The Department of Cultural Vocation Development laid out a year-by-year plan to preserve and develop Yingge's ceramics arts from two aspects: empowering ceramics culture and local revitalization in Yingge. The target audience is ceramics artisans in Yingge who are finding it difficult to meet market demands and are, as a result, suffering financially. The USR project team hopes to cultivate new ceramic artisans from Taipei Tech students through educational events, workshops, panel discussions, and connecting theory with practice in Taipei Tech's ceramic courses. The objective is to get different generations to work and collaborate for the creation of innovative new products.

Ceramic Art Empowerment to Preserve Invaluable Artistry

The USR Hub team for Yinnge ceramics divided the year into three development stages: recording techniques, creating, and showcasing artworks. For porcelain painting techniques, the team invited five Yingge artists during the early- to mid-stage for 19 technique classes to introduce brilliant ceramic artistry to the Taipei Tech students. In the ceramics course in the second semester of the 2019 school year, Taipei Tech invited Xiang-Hsuan Tseng, a young Yingge ceramics artist, to teach undergraduate students about modern blue-and-white porcelain, embroidery carving, and basic porcelain painting techniques. At the end of the semester, students created stunning ceramic ornaments that could be applied to daily life. The results were encouraging for the USR team, and they therefore decided to organize a summer workshop.

As for preserving traditional techniques, the USR team interviewed seven Yingge ceramic artists on porcelain painting, asking them to share their porcelain painting techniques. The USR team subsequently published books and video records to introduce porcelain painting into the education system in Taiwan. The USR team documented the following ceramic artists and techniques: Fat-Kun Lam (Japanese Akae), Tsun-Jen Lee (blue- and-white porcelain), Si-Hua Li (carving and porcelain painting), Hung-Yu Wang (blue-and-white underglaze), Xiang-Hsuan Tseng (relief painting), and Mei-Yun Chang (Fahua painting).

In addition to empowerment and legacy, the courses also brought students to Yingge to observe the production of raw materials, the current industry landscape, art museums, and potential local developments. Students were asked to reflect upon Taipei Tech's expertise and how they could contribute to society. The USR team is now working on designing and producing creative ceramic artworks. Related information on raw materials is also being compiled for future promotion and application. The next stage will focus on promotion and dialogue, facilitating connections between local cultures and Taipei Tech to discuss exhibition and performance strategies as well as offer students practical experiences in organizing exhibits. The USR team aims to introduce the current landscape of porcelain painting in Yingge and a new generation to the porcelain industry.

12 ∞
RESPONSIBLE
CONSUMPTION
AND PRODUCTION

**Ensure sustainable consumption and
production patterns**

HYGIENE, SAFETY, AND HEALTH POLICIES
AND REGULATIONS

In accordance with the provisions of the School Health Act of the Ministry of Education, the school preferentially adopts high-quality, local agricultural products certified by the central agricultural authority, and prohibits the use of genetically modified foods and their primary processed products. The relevant provisions are stipulated in our contracts with the school's outsourcing manufacturers.

**Policy created:
December 14,
2015**

**Policy reviewed:
December 30,
2015**

In order to effectively manage the handling and disposal of toxic substances, Taipei Tech established the Safety, Health, Environmental Protection, Fire, and Radiation Management Committee in 2000 to discuss matters related to the handling and management of toxic chemical substances and the removal of chemical waste to prevent harm to the environment. In 2020, we reviewed the management policy, revised the mandate of the management committee, and renamed the organization the Safety, Health, and Environmental Protection Committee. The committee is charged with managing the handling and disposal of toxic chemical substances, reporting their disposal status during committee meetings, and adjusting the toxic substances disposal policy as needed.

**Policy created:
January 11, 2010**

**Policy reviewed:
2020**

Furthermore, since January 1, 2012, the school has outsourced about 60 tons of waste per month. Starting from January 1, 2015, after actual calculations, the revised contract was for 50 tons per month, and a new policy was adopted mandating that waste must not be deposited on campus at all, but should be carried directly to the outsourcing garbage trucks and thence to waste incinerators for disposal.

**Policy created:
January 1, 2012**

**Policy reviewed:
January 1, 2016**

In line with the government's environmental protection and health and safety policies, plastic bags, melamine, disposable tableware, and disposable plastic straws are prohibited in campus facilities, and the provision of free plastic shopping bags is prohibited on campus. This policy is included in the contracts of the school's outsourcing manufacturers.

**Policy created:
June 9, 2006**

**Policy reviewed:
August 15, 2017**

The school also cooperates with the government to promote policies that implement waste reductions, energy savings and carbon reductions, environmental protection, and health considerations for school personnel. The use of melamine, disposable tableware, and disposable plastic straws is prohibited in restaurant areas, and free shopping plastic bags are also prohibited. The Taipei City Government bans disposable and melamine tableware.

**Main points and regulations:
Policy created:
August 4, 2015**

**Restrict the use of plastic straws once and implement regulations:
Policy reviewed: May 8, 2020**

The above policies are all applicable to all school vendors and suppliers.

WASTE TRACKING

The amount of waste generated and recycled across the university is measured every year. In addition, no waste is sent to landfills. A total of 600 tons of waste was generated from January to December 2020, and 4 tons of waste was collected from January to December 2020.

12

PUBLICATION OF SUSTAINABILITY REPORTS IN 2018-2020

Taipei Tech publishes an annual report to reveal the university's social responsibility performance.

Taipei Tech student team's color-changing design that aims to reduce food waste and promote responsible consumption was awarded iF Best of the Year in 2020.

13 CLIMATE ACTION

Take urgent action to combat climate change and its impacts

LOW-CARBON ENERGY TRACKING

Although the main campus is limited in area, the university is still committed to installing solar power generation on the roofs of buildings as well as to the long-term tracking and calculation of low-carbon energy use at the university. Total energy consumption in 2020 was 425,140 KWH/69,930.504 GJ. Total energy from low-carbon sources (solar power) in 2020 was 60,706 KWH .

CLIMATE ACTION PLAN AND PROGRAM

Taipei Tech offers 14 courses related to the issue of climate change in the departments of Civil Engineering, Architecture, Energy and Refrigerating Air-Conditioning Engineering, etc. Courses include such titles as Adapting to Climate Change Impacts, Low-carbon Energy and Society, and Environmental Ecology. A 5-class Ecology and Environmental Protection course will soon be offered in the general education field, and two lectures are presently scheduled: Climate Generation Action Guide and the NTU Climate Action Society's Guide to Sustainable Practice on Campus. Both discuss global warming and other climate change issues.

In June 2020, Taipei Tech held a professional training program titled Climate Change Regional Adaptation Facility Planning and Design Training Course that was designed to elevate public awareness of climate change issues. A total of 57 participants joined the program. Taipei Tech and the Ministry of Economic Affairs jointly organized the 2020 Regional Energy Resource Recycling Technology Seminar. The New Generation Sumitomo and Industrial Energy Conservation Research Center participated in the 2020 International Conference on Mechatronic, Automobile, and Environmental Engineering alongside several other domestic universities. The event discussed climate change issues, technological developments in resource integration, and improving the level of innovative technology. Taipei Tech also held an energy conservation and carbon reduction talent cultivation competition in colleges and universities that focused on such topics as healthy sports and clean energy and offshore wind turbine braced structure collision analysis. The school also set up an interdisciplinary course in offshore wind power technology to promote the development of green energy and develop local technologies.

Taipei Tech is committed to cooperating with local governments on climate action projects. From 2018 to 2020, 25 projects, such as and offshore wind power survey, were implemented. From 2020 to 2023, we plan to set up the Energy Technology Research Institute, which will function as a center for the research and development of offshore wind power, green energy materials technology, and intelligent energy-saving technologies. The direction of research will largely be determined by a mix of government energy policies and international cooperative research efforts.

We work in conjunction with nine major domestic technician associations and the Taiwan Research Institute to promote the localization offshore wind power engineering technology. After signing an MOU with the European Chamber of Commerce Taiwan (ECCT) and becoming a member of the Low Carbon Initiative (LCI), Taipei Tech participated in the 2020 Global Offshore Wind Summit Taiwan (GOWST). Taipei University of Technology and Taiwan Shixi Engineering Consulting Company signed an MOU in 2021 to undertake projects and talent cultivation programs related to sustainable energy and smart buildings. Taipei Tech has established research centers that provide local education programs and campaigns on climate change risks in conjunction with NGOs, such as the Water Environment Research Center's provision of training to increase public knowledge of water resources protection.

Furthermore, the Water Environment Research Center and Disaster Prevention Engineering Technology Center both work with the government to conduct research on impacts of climate change and natural disasters, and discuss Taiwan's response capabilities and mitigation measures for natural disasters. For example, in 2020, a Taipei Tech research team continued its cooperation with the Environmental Protection Administration on a regional climate change adaptation facility project, and another team assessed the feasibility of a bridge improvement project with Freeway Bureau, MOTC.

The Disaster Prevention Engineering Technology Center has long supported the government during local climate disasters, and is dedicated to developing early warning and monitoring systems for disasters. In 2020, the Disaster Prevention Engineering Technology Center built a flood warning platform, a smart disaster prevention platform, and a smart flood prevention network. The Water Environment Research Center conducted research on flooding hot spots, flood forecast analysis technology, and permeable pavement monitoring, with the goal of developing smart flood prevention technology.

CARBON NEUTRALITY

One school policy outlines a commitment to carbon neutrality. The teachers and students at the school have given full play to their professional abilities to develop a variety of methods to implement carbon neutrality. Moreover, the university has a set deadline and plans to achieve carbon neutrality for scope 1 and 2 (indirect emissions from purchased energy) by 2048. Furthermore, the university is in line to achieve the carbon neutral goal for scope 1 and 2 before 2048.
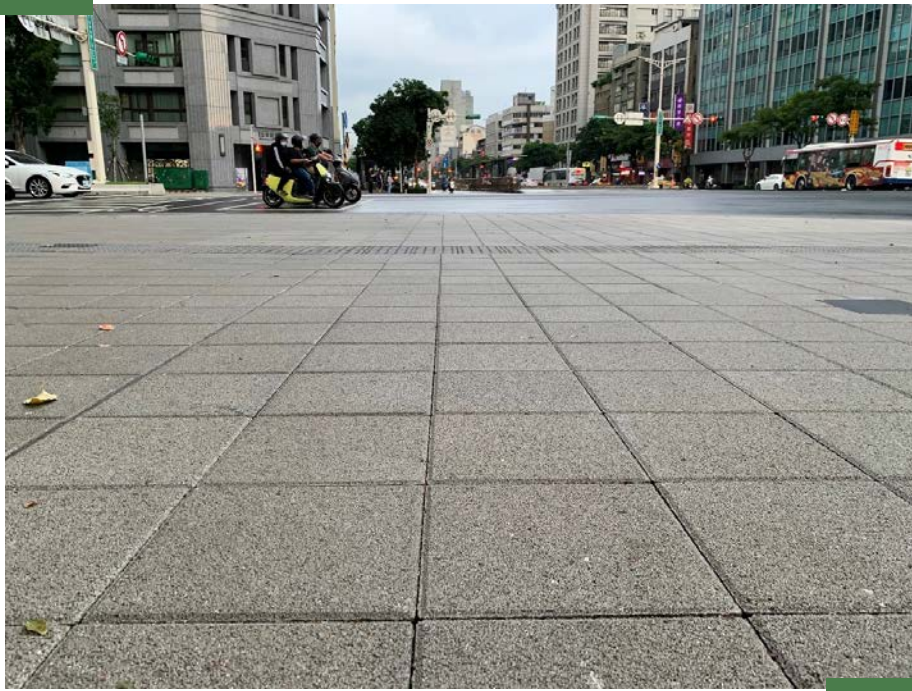
Side walk paved with porous materials to reduce surface temperatures and absorb excessive runoff

透水磚鋪面

瀝青鋪面

▼ 水位流量計　　■ 解說教育牌
● 鋪面溫度監測計　ι⁻⁻¹ 示範基地
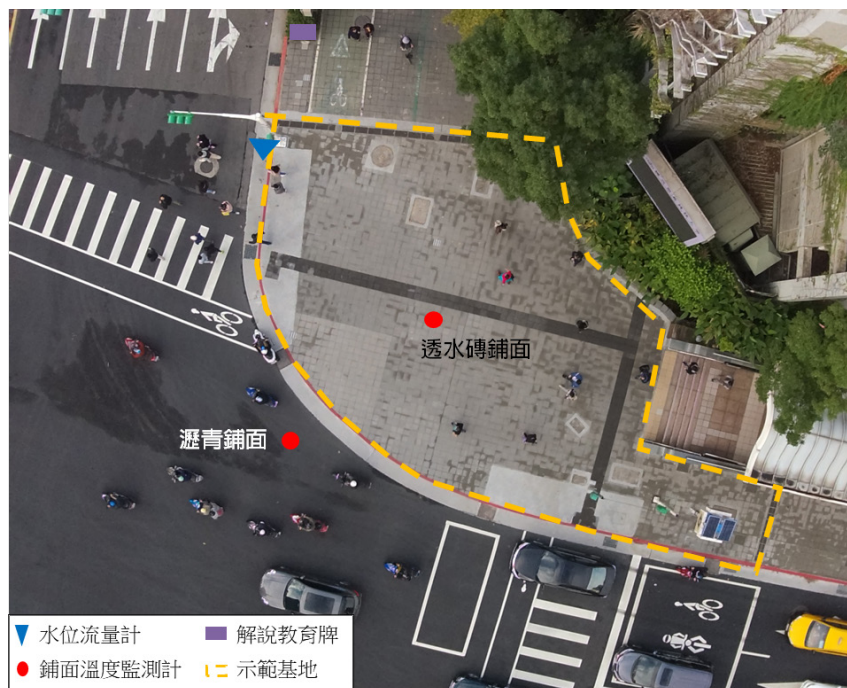
Researchers from Taipei Tech's Water Environment Research Center installed a sensor to monitor how much water was absorbed by the pavement

Conserve and sustainably use the oceans, seas and marine resources for sustainable development

WORKING WITH NONPROFIT ORGANIZATIONS AND LOCALITIES

Our Taipei Tech team continually seeks support from nonprofit organizations that have similar pursuits to resolve a range of issues. One notable example of this is the "plastic-free ocean" movement led by the Wilderness Society.

A specific perspective is created by focusing on the problems of a locality. Yet when the focus is moved to the industry which causes the problems, it becomes clear that similar problems can be fomented by different industries. For instance, there is currently a growing need for mountain agriculture and aquaculture across Taiwan. Despite differing local characteristics, different localities can still learn from one another when faced with a similar need to develop agriculture, aquaculture, or any other industry. It is Taipei Tech's hope that our team can devote their core knowledge and skills to solving a variety of problems in localities across Taiwan, thereby helping all localities that have similar needs to form a strongly connected network so that they can collectively find solutions.

"The Good Practices of the Circular Economy"
Site: Jinshan District, New Taipei City

Every year, more than 8 million tons of plastic waste is dumped into the ocean, covering 1.6 million km2 (approximately three times the area of France). Thus, ocean protection and reductions in the sources of plastic waste have become major issues that all global citizens must face. In Taiwan, the beautiful coast of Jinsgan Yongmin Community, situated in the rural area of the Northern Coast, is suffocating under piles of ocean waste. On top of that, the community is also facing other problems, such as severe rural-urban migration, population aging, and the dying out of their culture of the traditional method of sulfuric fire fishing. Therefore, we are obligated to put forward a solution to the sustainable development of the community through the integration of value creation in the implementation of the circular economy.

USR x CSR Builds a Mutually Beneficial Ecosystem in Multiple Sites

To facilitate marine sustainable development and to achieve sustainable cities and communities, Taipei Tech's Department of Industrial Design USR Hub team cultivates students to develop sustainable development thinking through the course – "Sustainable Development" focuses on helping students understand the problems and hidden causes of the marine environment from the knowledge dimension. In the course, Jinshan Xialiao Beach and Jinshan Tiaoshi Coast were selected as locations for field study. In the execution dimension, the course led the students to gain an in-depth understanding of the development challenges and the rich culture of the community through beach cleaning and field study.

Centered at the core of Design for SDGs and targeting integrating CSR and USR, we connected our partners in all sites in order to build the "Virtuous Cycle – Design for SDG" in both academia and industry fields, to implement the concept of marine sustainable development as depicted in SDG 14 and promote our fruitful designs.

Our team collaborated closely with Southern Taiwan University to carry out activities of Design for SDGs at the two ends of Taiwan. Furthermore, we co-held a Marine Sustainability Beach Cleaning Activity and Sustainable Design Lectures with external corporations and associations, including LITE-ON Technology Corporation and The Society of Wilderness, which are devoted to sustainability. In the activities, our students cleaned up Jinshan Tiaoshi Coast and turned the ocean waste into light fixtures by utilizing their talent in design. Their art pieces incorporated local Jinshan cultures, re-creating the visual experiences of the traditional method of sulfuric fire fishing.

The artwork – Dazzling Effulgence – was inspired by the sulfuric fire fishing method of Jinshan. The exhibition – Design for SDGs Ocean Sustainability X Forest Sustainability – was displayed in POPOP Taipei, which created an exhibition hall featuring SDGs with innovative space. The art pieces of students in the course were also displayed in the three exhibitions held by the team. The three exhibitions were "Design for SDG14 Ocean Waste Light Fixture Design" (collaboration among two universities and three departments), co-held with LITE-ON Technology Corporation, "Design for SDG14 Ocean Waste Innovative Design" at the National Museum of Marine Science and Technology, and "Design for SDGs Ocean Sustainability X Forest Sustainability", held at POPOP Taipei. The art pieces were presented in a variety of forms, such as virtual sulfuric fire fishing experience created by the Department of Interaction Design, recycled products from Styrofoam waste by LITE-ON Technology Corporation, and an ocean waste cleaner prototype by Azure, an NGO. Through diverse forms of art pieces, the goal of the exhibitions was to raise the public's awareness of SDG 14 issues.

Advertisements of the exhibitions are placed regularly on mainstream social media, such as Facebook, Instagram, and YouTube. An official website has also been established and is updated regularly to horizontally expand the reach in terms of diversity and channels. The public can view the elaborately produced videos of our art pieces as well as the history and highlights of our exhibitions on the website.

15 LIFE ON LAND

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss

SUSTAINABLE ECO-CAMPUS

For the past couple of decades, Taipei Tech has poured resources into creating a sustainable eco-campus. Several landscaping projects and structures on the campus are designed to allow plants and creatures to thrive on the Taipei Tech campus, in spite of the fact that it is located at the center of Taipei City. These projects include a stream that runs through the campus, a pond, a structure that allows for green growth, and several buildings dedicated to sustainability research and education. Through these endeavors, we are able to provide an environmentally-friendly habitat on campus for several local species. In the 2020 UI GreenMetric University Rankings, Taipei Tech is ranked first in the High-Rise Building Category and No. 118 in the overall rankings as one of the world's most sustainable universities.
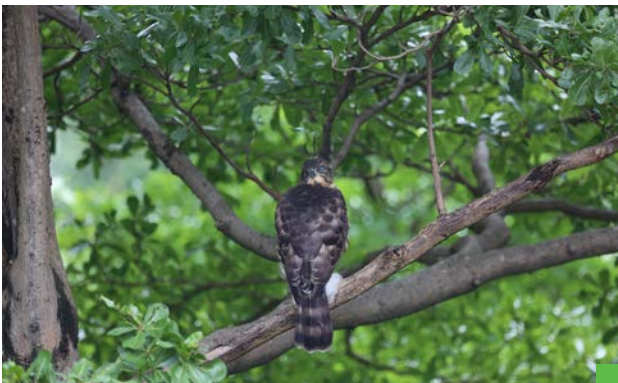
PUBLIC ENGAGEMENT

Our faculty and students carried out a collaborative project with the local Atayal tribe in Jianshi Township to reconstruct an eco-farm and implemented a skills exchange platform to promote natural, eco-friendly farming. Through the cultivation mechanism and structured training, our students worked closely with members of the tribe to develop a step-by-step plan for analysis and strategic design. By forming a partnership with a local indigenous tribe to improve agricultural development and maintain a shared land ecosystems, we are striving to achieve a more sustainable future.

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

FREEDOM OF SPEECH

At Taipei Tech, we host regular Affairs Meetings to discuss important issues at the university; meeting participants consist of representatives elected from the faculty, student body, and staff, who form the highest governing body and voice their opinions in these meetings. The regulations passed in Affairs Meetings and the composition of the governing representatives are posted on the official website of the Office of the Secretariat.

Student self-government is a crucial element of the promotion of ethics and the democratic spirit. To protect the students' right to speak freely and voice their ideas, concerns, and opinions to the school administration, Taipei Tech established student self-government in 2005 and the Student Council in 2007. In accordance with the regulations, student representatives can participate in school-level decision-making meetings such as the presidential election, university assembly, and student and academic affairs meetings. Taipei Tech also approves student applications to establish self-governing student groups. 62 student clubs and 23 student associations have been established so far.

Taipei Tech respects the diversity of opinions on offer from our staff, faculty, students and visitors. We have established a "Sound Wall" platform to provide a space for the free exchange of opinions. Stakeholders can also express their personal opinions publicly via social media platforms such as Dcard-Taipei Tech, PTT, and Facebook. In 2020, NTUT Student Associations were honored with the High Distinction Award, Financial Excellence Award, Presentation Excellence Award, and Outstanding Academic Rights Award at the College Student Union Achievement Exhibition, an indicator that Taipei Tech values the rights of students, and provides a safe, neutral platform for students to discuss issues openly.

ANTI-BRIBERY AND ANTI-CORRUPTION POLICY

As a public university, faculty and staff of Taipei Tech must strictly abide by the anti-bribery and anti-corruption policy and regulations issued by the government. The regulations are published on our website. For students, the Guidelines for Student Recognition and Discipline clearly stipulate the penalties for violations of the law.

In order to promote equal rights and freedom, Taipei Tech's Library issues the Taipei Tech Youth bimonthly. In this publication, we encourage students to submit articles on different ethics topics in each issue. We particularly emphasize the rule of law and human rights by publishing articles on human rights, fairness, and justice to advocate for equality and freedom, with the aim of enhancing students' knowledge of human rights and the rule of law while guiding them to learn to respect different ethnic groups. We also explore issues related to gender equality, such as the legalization of abortion and increasing women's physical autonomy, and the difficulties faced by women who have recently immigrated to Taiwan.

STAKEHOLDERS ENGAGEMENT

As a national, public university, Taipei Tech has to follow national regulations and policies regarding our engagement with local stakeholders or donors. In 2004, we established a Donation Management Policy to ensure that our funds were in order. We also show local stakeholders and donors how we use the donations we receive on our Giving website. Accordingly, Taipei Tech is able to identify local stakeholders and donors and engage with them.

Policy created: 2004	Policy reviewed: 2019

At Taipei Tech, our Alumni Liaison Center, Office of Industrial and Academic Cooperation, and PR section are charged with recognizing and engaging with local stakeholders. The Alumni Liaison Center is in charge of engaging with our alumni network and managing the financial support and resources that our alumni provide. The Office of Industrial and Academic Cooperation is devoted to creating mutually beneficial relationships between Taipei Tech and corporations around the globe. The PR section is responsible for conducting effective conversation and communication with local stakeholders.

Taipei Tech has several policies that were designed to support academic freedom, including subsidies for interdisciplinary academic seminars, inter-university grants, international academic collaboration projects (in 2020, there were 19 collaborating institutions), and international joint research projects with top universities (i.e., the top 300 universities as ranked by QS). Taipei Tech also utilizes Problem-Based Learning (PBL) to promote cooperative research between Taipei Tech and other research institutions, hospitals, and enterprises, which enables researchers to enjoy enhanced academic freedom. Furthermore, Taipei Tech has developed an innovative R&D platform to collect information on research and development and educational opportunities, internships, and enterprises that allows researchers to browse and exchange information freely.

16

Taipei Tech has work together with government departments in policy implementation and research projects for many years. From 2019 to 2021, we initiated a total of 500 projects; our research projects amount to over NT $ 200 million every year.

PROVISIONS FOR POLICY RECOMMENDATIONS

According to the Civil Service Work Act and NTUT's Guidelines on the Handling of Part-time and Secondment of Full-time Teachers, our faculty and staff members can concurrently hold positions as consultants in government agencies in their area of expertise to provide policy recommendations to their government agency. Since 2020, 307 faculty and staff members have concurrently held consulting positions in central or local government agencies. Furthermore, our teachers are entrusted by the government to provide professional recommendations. For example, Professor Song of the Department of Civil Engineering executed a 2020 prospective study of technical rules for offshore wind farm site surveys and design, and established assessment standards for offshore wind power technology in Taiwan.

Our faculty and staff members can also concurrently hold positions as policy advisors in government agencies in their areas of expertise to assist the government in researching and formulating regulations and policies. Since 2020, 55 part-time faculty members in our university have advised government agencies on economic topics, 12 on legal topics, 238 on technical topics, and 2 on climate change topics. Taipei Tech also participates in the Ministry of Economic Affairs' Industry Professional Assessment System (IPAS) to promote nation-wide engineering talent training. Since 2020, we have built 5 technology bases, and trained more than 350 people in total.

GRADUATES IN LEGAL AND CIVIL ENFORCEMENT

Out of 700 graduates, 19 (0.5%) studied the ethics in law and civil enforcement.

17 PARTNERSHIPS FOR THE GOALS

Strengthen the means of implementation and revitalise the global partnership for sustainable development

RELATIONSHIPS WITH NGOs AND GOVERNMENT FOR SDG POLICY

Taipei Tech participates in government projects and regional non-government organizations' sustainable development goals and policy initiatives. On average, we take part in 10 projects per year in fields such as hydrological monitoring, the exploration and promotion of sustainable campuses, watershed conservation management evaluations, and offshore wind power surveys.

In addition, professors from Taipei Tech serve as policy advisors in the Executive Yuan and Taipei City Government, where they assist government or regional NGOs in formulating regulations and directly influence the sustainable development goals and policies of the national government.

Taipei Tech held the Challenge and Response to Promoting Circular Economy and Sustainable Development Forum on July, 2020, and invited experts from benchmark enterprises, think tanks, and academic circles along with the public sector at home and abroad to share their experiences, challenges, and practices in promoting the circular economy, including green policies, the challenges faced by enterprises, and circular economy business models.

BEST PRACTICE IN COLLABORATION FOR SDGs

Taipei Tech is an important participant in international academic collaborations involving SDG data collection and analysis. For example, in 2020, we analyzed environmental impacts and did a cost-benefit analysis for open field vs. greenhouse cultivation in Taiwan and Australia. Taipei Tech also cooperates with Chulalongkorn University in Thailand and Kyushu University in Japan on research exchanges involving Agroecology, youth residence design, humanitarian architecture, water and soil conservation, and eco-friendly landscape restoration.

Taipei Tech publishes an annual report that reveals its performance in terms of university social responsibility. Under the leadership of Prof. Chih-Hong Huang, Taipei Tech promoted local produce to Malaysia in cooperation with the Quri Atayal tribe of Jianshi Township in Hsinchu County. Our teachers and students who participated in this program are dedicated to building eco-friendly farms and developing innovative marketing, and then initiating natural agricultural technology exchanges with other indigenous communities at home and abroad.

Taipei Tech also coordinates with the Eng Meng Tsai Charitable Foundation's "Send Love to the Countryside" project, which provides financial assistance to disadvantaged families; cooperates with the Baby Coaching Association to promote woodcraft culture courses and aesthetic education; and executed the Shiding Yongan Tea Fragrance New Source Project with the Shiding Tourism Association to assist the local development of Shiding District.

COMMITMENT TO SDG EDUCATION

Socio-economic transformation with its accompanying technological changes has had a huge impact on the environment. Therefore, sustainable development is now regarded as a significant issue globally. Taipei Tech offers courses in several departments combined with interdisciplinary expertise to cultivate students awareness of the importance of sustainability. In the first semester of 2020, the school offered a total of 114 courses, with 5853 attendees, that touched on sustainability issues.

The departments and programs listed below educate students about sustainability. It is hoped that these curricula will make contributions to this global issue.

1. Departments directly educating students in sustainability:
   (1) Graduate Institute of Environmental Engineering and Management
   (2) International Master's Program in Creative and Sustainable Architecture Studies

2. Courses related to sustainable education:
   (1) Sustainable Environment Design
   (2) Development of Solar Photovoltaic Technology
   (3) Nuclear Energy Science and Technology
   (4) Energy-saving Science and Technology
   (5) Ecological Engineering Methods and Civil Engineering Environments
   (6) Smart Energy Technology (Micro)
   (7) Interdisciplinary Course on Offshore Wind Technology
   (8) Green Energy and Energy Saving (Micro-Learning)
   (9) Green Building (Micro)

In addition, Taipei Tech attaches great importance to sustainable education activities for alumni and local residents, including:

1. A creative facemask design contest organized by Taipei Tech's Academic Affairs Office. The winning design was printed on 6,000 masks. Half were given out in neighborhoods around the university, while the other half were donated to Wanfang Hospital.

2. A course titled Cross-domain and All-Age Product Design and Development was offered during the second semester of the 2020 school year. An evaluation and verification process was conducted after each team designed their products. Afterwards, the school's Wood Innovation Center assisted in product optimization, and the productization of the products was discussed with the Central Wood Works Factory. In collaboration with students in the Industrial and Furniture Design Department of Dongshih Industrial High School, the students produced their product on a small scale. The design modification experience was shared with the students at Hou-Feng Community College, and woodworking culture and innovative design were promoted as well.

3. This year, we began integrating the SDGs into our library promotions. As this year's coordinator for the University System of Taipei, we planned the following activities in the new semester: 1) Two online courses on electronic resources related to SDGs, with places reserved for teachers and students from the four schools in the system; 2) an SDG online book fair with a list of books on topics chosen by the four schools 3) an SDG quiz activity during Library Week. Through these promotions, our library helped the teachers and students in the system become familiar with SDGs.

4. Since 2008, the school has cooperated with the Ministry of Education to subsidize colleges and universities that provide service learning courses. About 1,500 students participating in service courses each academic year. 33 social welfare units have signed contracts for service-related training courses.

5. We cooperate with local neighborhood leaders to introduce students to service learning, which often involves cleaning the streets and parks in the neighborhood. In the future, we plan to involve students in community senior citizen activities such as meal delivery and other services for the elderly to improve the quality of student service learning. We also enlist the help of neighborhood leaders to improve traffic safety in the area around the campus, arrange for YOUBIKE stations, advocate for local smoking bans, and conduct security patrols in the area.

6. We provide art and cultural activities in nearby neighborhoods and invite community members to participate in our school's art and cultural activities to strengthen communication with nearby residents.

7. To promote sustainable development education, Taipei Tech (NTUT) organizes lectures and forums such as the 20210421 ESG Forum, 20210704 EMBA Forum, and 20210904 Campus Ecological Environment Sharing activity.

"Woodcraft Cultural Legacy Renewal Project"
Site: Fengyuan Dist., Taichung City/ Taipei Tech

Founded in the same year as the ROC (Taiwan), National Taipei University of Technology boasts a rich history of carpentry education that has evolved over the past century. Following the Japanese ruling period, Taipei Tech later upgraded from a technical institute to a junior college of industrial technology and then to today's industry-specific university. A good number of graduates have gone into the woodworking industries. More than six years ago, Taipei Tech's connection with the Taichung-based woodworking industry grew even stronger when the university founded the Centre of Woodwork Technology and Innovation in the previous Plant Fengyuan of Yuen Foong Yu Group. The old-time distribution center has now become the starting point for Taipei Tech to explore new possibilities in Taichung, a hillside city.

Two Schools Join Taipei Tech's Efforts to Protect the Woodworking Culture of Fengyuan, Taichung

A forest railway was built to exploit the rich forest resources in the Basianshan, which led to further advances in forestry. However, these resources were quickly depleted due to overlogging during the Second Sino- Japanese War. After the ROC government recovered Taiwan, Daxueshan's forest became the main logging area that provided lumber for wood products and furniture manufacturing, hence leading to the thriving lumber industry along the mountain line (Taichung Line). Years later, the woodworking industries began to dwindle amid a turbulent economy, but even so, there are still some woodworkers and carpenters who persevere in their careers with a strong sense of mission.

In the scorching summer of 2019, Taipei Tech invited students of the Department of Commercial Design of NUTC and the Department of Furniture Design of Taichung Municipal Dongshih Industrial High School to form a cross-functional team devoted to incorporating woodcraft into commercial design in order to carry out its USR practices. The Chinese name of this project literally means "to create, to be deep-rooted, to grow and thrive, and to pass on traditions," conveying an earnest hope that through cross-field cooperation, the woodworking and woodcraft industries can be better developed to win recognition from people of different generations as well as promote local awareness and develop young woodworkers through college education. During the initial stages, it was the responsibility of the students of the Department of Commercial Design of NUTC to develop an identity system and create a brand image. Then with the help of the Dongshih Forest District Office, Forestry Bureau, this interdisciplinary team published booklets and an educational video to disseminate forestry knowledge, such as "thinning" and "alien species."

In the period between early winter 2020 and spring 2021, the team visited a carpenters' workshop (a small factory). All team members were impressed by the advanced woodworking techniques and profound knowledge possessed by the carpenters, who were approaching the age of 70, and were greatly moved by their life stories spanning from several decades as they had all witnessed the ups and downs of the woodworking and lacquerware industries. Their stories were told amid booming noises, yet we instinctively felt a heartfelt exchange between people. To keep carpenters' spirits alive, the team has done its best to preserve these touching moments through texts, pictures, and video records in order to more effectively communicate knowledge through modern media sites for different generations to discover.

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It Takes Ten Years to Grow a Tree but a Hundred Years to Grow People: From Cross-field Collaboration to Cross-generational Mentoring

During the summer holidays in 2020, five carpenters and one young lecturer were invited by the Huludun Cross-field Design Workshop to mentor young students from Taipei Tech's Department of Industrial Design (interns at the Centre of Woodwork Technology and Innovation), D-school of National Taiwan University, Department of Commercial Design of NUTC (and its graduate program) as well as the Departments of Furniture Carpentry and Interior Design of Taichung Municipal Dongshih Industrial High School. During the ten-day workshop, students were led by mentors to visit scenic spots and shared their ideas with teachers. The students, from diverse backgrounds, were given the opportunity to brainstorm fresh ideas and learned to make wooden statues with a woodcrafter's spirit and woodworking techniques. The aim of this workshop was to spark creativity among participants as woodcrafters and young designers were given the opportunity to stay in the hillside town for ten days, strolling around quiet alleys to rest their minds. This ten-day workshop yielded worthy results as participants initially visited a number of scenic spots and then freely shared their ideas with woodcrafters before the participants got involved in the ideation process.

In the spring and summer of 2021, the "Interdisciplinary Product Design for All Ages" course, developed by Taipei Tech and the School of Occupational Therapy, NTUCM, and D-School of NTU, served as a platform for the collaboration of universities to co-design a board game for the healthy brain development of older adults. Not only did this course impart professional knowledge, but it also guided students throughout the process of design thinking in which a model-making workshop was conducted, where all participants came together to brainstorm and gain hands-on experience by learning to grasp both traditional and modern woodcraft techniques. Older adults were then arranged to play the board game. Students were very delighted to find that all seniors loved this board game and quickly learned the rules. With a lot of laughter from the older adults and applause from students, intergenerational harmony was successfully promoted. We hope that playing the board game together could help to inspire creativity and draw people's attention to woodcraft culture and seniors' wellbeing. That is, woodcraft can be used to close the gap between seniors and young students and help them form a bond.

After the designs of wooden statues and the above-said board game were completed, the next step is to produce the products in small batches. The students of Dongshih Industrial High School and local manufacturers will optimize the design before the small-batch production. An experience activity is expected to be held next year, and by that time, texts created to communicate knowledge along with booklets promoting forestry education and theme-specific videos will be ready for broader dissemination. Meanwhile, we will continue to hold experience activities, offer classes that teach woodcraft techniques, conduct sessions about wood education, and promote woodcraft legacy through various channels. Whether it be operating machinery to make wood products like a martial artist or appreciating wood-related knowledge like a literati, the USR team attempts to transform wood-related experiences into memories about one's hometown and cultural legacy.

The knowledge and skills acquired through the implementation of the plan are worthy of appreciation. Yet, one of the best memories that the USR team has is human connections, which deepen the bond between people. Many people imagine achieving more in a big city, just like a rocket launching into the sky, but they often reminisce for example about the sweet smells of paddy fields and the rural areas of Taichung that are throbbing with life, because they love the cultural environments of the hillside city and have come to appreciate the similarities and differences between the hillside city of Taichung and the bustling Taipei. Taichung seems to have the power to calm an anxious mind and offer a home to drifting souls.

臺北科大永續發展願景
National Taipei University of Technology –
Our Vision of Sustainable Development

願景和策略 Vision and Strategy

臺北科大將持續對準全球永續發展的前瞻趨勢，將 SDGs 納入校務發展計畫，具體落實於教學、研究、服務及校園治理經營等面向，全面以永續發展目標做為重要發展策略，建構臺北科大的永續發展策略與願景。

We, Taipei Tech, will continue to align our school development plans with global sustainable development trends, by incorporating SDGs into the school development plan and incorporating SDGs into our teaching, research, service, and school management. The SDGs are an important development goal that informs our vision of Taipei Tech.

領導力與溝通 Leadership and Communication

臺北科大在推動校務與永續發展目標的接軌下，盼透過大學的影響力，確保教師、職員、學生與大眾皆能提升對於 SDGs 的認識與認同，如透過出版物、教育影片，及辦理相關學術交流與展覽活動；同時本校開放校園的政策，有助於促進一般大眾對於相關議題資源的接觸。

By integrating SDGs into our school development plan, we look forward to exerting influence on society and increasing the understanding and awareness of SDGs among our faculty, students, and the general public through our publications, educational videos, and SDG-related academic exchanges and exhibitions. Meanwhile, our open campus policy will also provide the general public with greater exposure to SDGs.

文化參與 Cultural Participation

臺北科大的圖資中心扮演著校內重要的知識傳播平台角色。在 SDGs 的實踐中，規畫建構本校 SDGs 網路資訊平台，並彙整 SDGs 的相關知識，以及校內各處致力於 SDGs 面向的實踐成果，將良好的案例經驗共享給公眾及任何有志於永續發展研究的夥伴，持續朝向全球永續發展目標邁進。

Taipei Tech's Library and Information Center plays an important role as a knowledge dissemination platform in the school. As part of our pursuit of sustainable development, we plan to establish an SDG online information platform, to disseminate SDG knowledge and publicize our SDG achievements. In this way, we can share our SDG cases with the public, especially those who aspire to take part in research involving SDGs.

大學教育 College Education

教學：

本校積極推動大學社會責任實踐及 SDGs 目標與校內各領域學院系所、通識中心、師培中心、進修推廣部等相關教學中心的結合，分從課程規劃融入永續發展知識教育，並透過各項獎補助措施，鼓勵教師規劃優良的 SDGs 融入教學實踐方案，擴及至本校 10,700 名學生之中。

Education：

We actively promote USR and SDGs in our school's various departments, general education centers, teacher training centers, and division of continuing education. We providing rewards and subsidies to encourage our teachers to incorporate SDGs into their teaching plans.

研究：

透過制度化的支持措施，培育實務前瞻人才，本校鼓勵論文研究與 SDGs 議題的對接，並將運用所建「創新成熟度系統」，促進社會貢獻度高的研究方案，轉化作為為社會責任實踐計畫的執行方案。

Research：

Through institutional support measures to cultivate practical and forward-looking talents, our students and faculty members are encouraged to conduct research into SDG issues and use the InnoRL System to promote research projects with a high degree of social contributions. Thus, we can put USR into practice by transforming these research projects into executable plans.

服務：

本校強化學生品德教育，透過良好的服務學習、勞作教育、國際志工、服務性社團、美學教育等活動機制，讓學生能幫助社會所需，實踐社會正義，並能陶冶學生優良的人格特質與人文藝術涵養。

Volunteering：

We strengthen students moral education through service- learning, hands-on training, international volunteering, service clubs, aesthetic education, and other activities. Hence, students can practice social justice while cultivating their most positive personality traits and cultural literacy.

大學社會責任實踐計畫 University Social Responsibility

臺北科大積極推動「大學社會責任實踐計畫」，促進校內各領域師生的普遍參與，透過將專業課程與社會議題及永續發展目標結合，並以在地場域的真實困境為命題，包含經濟發展、文化傳承、教育關懷、環境保護等主題，來參與協助地方場域面對對永續發展挑戰，提出有行動方案。

Taipei Tech actively promotes the universal participation of our teachers and students in the university's Social Responsibility practice. By incorporating social issues and SDGs into professional courses, and using actual cases in the field as propositions for topics such as economic development, cultural heritage, educational care, and environmental protection, we assist members of the community in facing the challenges of sustainable development and developing action plans to overcome them.

綠色校園 **Green Campus**

台北科大曾獲「2020 年世界綠能大學」排名高樓型大學世界第一名，在綠色創能、節能、儲能、綠建築、循環設計等方面已有許多研發成果。我們並將持續推動校園綠能建設、節能減碳與綠色採購等有善環境的校園治理政策。

Taipei Tech won first prize in UI's GreenMetric World University Ranking— High Rise Building in 2020. We have achieved a lot in the areas of green energy, energy savings, energy storage, green buildings, and recycling design. We will continue to foster environmentally friendly school governance policies such as green buildings, energy savings, carbon reductions, and green procurement.

校友參與 **Alumni Participation**

臺北科大的校友活躍在臺灣社會各界企業中領導階層之中，素有「企業家搖籃之稱」。透過豐沛的校友資源，我們期盼能鏈結校友與企業界的資源，共同促進永續發展議題的合作，共善大學社會責任與企業社會責任。

The alumni of Taipei Tech, which is known as the "cradle of entrepreneurs" in Taiwan, occupy leading positions in Taiwanese companies in a wide variety of fields. With the abundant resources provided by these alumni, we look forward to making connections with businesses, promoting the UN SDGs, and working on university social responsibility and corporate social responsibility in conjunction with businesses.

全球大學排名 **World University Rankings**

臺北科大將提升校務治理與 SDGs 的接軌，透過參與高等教育績效的全球衡量標準，如 THE 泰晤士高等教育大學影響力排名，向成為國際優良大學的目標邁進。

Taipei Tech will improve the integration of SDGs into school governance and move toward the goal of becoming a top-ranked global university by participating in global rankings of higher education performance such as the Times Higher Education University Impact Rankings.

我們期望這份永續報告的出版能夠促進對話和合作，無論在是在國內、海外，政府或私人單位，為非政府組織工作，從事政策或教育領域的各方夥伴，都能在共同關注的議題上一起戮力齊心，為全球永續發展目標實踐的工作，盡一份心力。

We hope that the publication of this sustainability report can promote dialogue and cooperation, whether domestically, overseas, in the public or private sector, or among those working in NGOs or involved in policy-making and education. We are all partners in a field of common concern. By joining together, we can all contribute to the work of meeting global sustainable development goals.

TAIPEI TECH

SUSTAINABLE DEVELOPMENT GOALS