

02 Sustainability Governance and Performance (G)

- Academic and administrative staff from the southern region during 2020-2022: **71%**, providing local employment
- Taiwan's first "Academic and Administrative Staff Stress-Relief Center" equipped with **2** visually impaired masseurs.
- Total amount of funds for optimizing teaching space and facilities during 2020-2022: **NT\$800 million**
- Number of certificates and licenses obtained by students during AY2019-2021: 6,091, the number of certificates and licenses obtained in AY2021 over AY2019: **▲10.4%**.
- Scholarships and grants for economically and culturally disadvantaged students each year: **8%** of the total amount of tuition and fees and **5% more** than that of MOE; benefited up to **41,324 persons** with a total amount of **over NT\$31 million**.
- Employment rate of graduates during AY2019-2021: **over 94.6%**.
- Total income from university-industry collaboration projects and technology transfer during 2020-2022: **over NT\$2 billion** and **over NT\$37 million** respectively.
- Research fund for sustainable development during AY2019-2021: about **NT\$1.6 billion**, nearly **50%** of the total R&D funds.



■ In 2022 we earned the first prize for "integrated performance" in the VTET category at the USR Awards 2022 by *Global Views Monthly*. This has proven the success of our outstanding multifaceted school administration that aims to cultivate top talents who seek the common good with the land and environment and to develop power that changes society for sustainable development. [Further reading](#)

► 2-1 Fostering Quality Workforces 3.7 4.2 4.7 8.5 10.3

In response to the need for teaching, research, and institutional development, we have established a well-planned personnel system in accordance with the organizational charter. Academic staff, administrative staff, and contract staff are hired in accordance with the “NPUST Regulations for Assessment of the Appointment and Promotion Full-Time Academic Staff”, “NPUST Regulations for Assessment of the Appointment and Promotion of Academic Staff Hired with the University Endowment Funds”, and “NPUST Instructions for the Selection and Promotion/Transfer of Contract Staff” to maintain fair, impartial, and open recruitment and appointment and build diversified, competitive academic and administrative workforces based on the “appointment by talent” principle.

In the past three years, over 61% of staff are academic staff, and **over 71%** of all staff are from the southern region. Hence, we offer stable local opportunities.

We have also been facing a retirement trend in recent years, with 87 academic and administrative staff retiring in the past three years. To improve teaching quality, expand R&D capacity, and enhance administrative efficiency, apart from hiring 109 new academic and administrative staff with outstanding academic and practical achievements, we have also established the General Research Service Center (GRSC) to recruit excellent non-NPUST scholars and hire outstanding graduates from NPUST postgraduate programs to be research staff, develop a talents formation system, and create a sound research environment to retain quality talents.

● Human Resources

Workforces in Past 3 Years (unit: persons)

Year	Full-time Staff				Non-full time Staff				Total
	Full-time Academic Staff	Full-time Administrative Staff	Contract Staff	Total	Part-time Academic Staff	Fixed-term Contract Staff	Temporary Workers	Total	
2020	445 (35.9%)	159 (12.8%)	180 (14.6%)	784 (63.3%)	234 (18.9%)	5 (0.4%)	216 (17.4%)	455 (36.7%)	1,239
2021	411 (33.7%)	154 (12.6%)	184 (15.2%)	749 (61.5%)	225 (18.5%)	3 (0.2%)	241 (19.8%)	469 (38.5%)	1,218
2022	447 (36.9%)	158 (13.1%)	179 (14.8%)	784 (64.8%)	228 (18.8%)	4 (0.3%)	194 (16.1%)	426 (35.2%)	1,210

*Source: October data reported to the Database of Higher Technological and Vocational Education

*Full-time academic staff include academic staff within the staff complement, project academic staff, research staff, and teaching assistants and military training instructors in the former system.

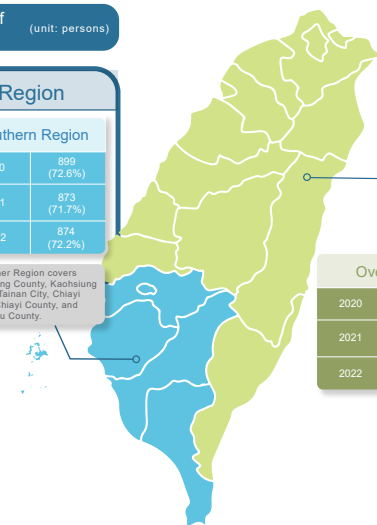
*Administrative staff include both civil services and campus police.

GRI2-7~8, GRI2-18~21, GRI2-26, GRI401, GRI404, GRI405 | SV-ED-000.D

Total Number of Academic and Administrative Staff by Gender, by Age, and by Region in Past 3 Years (unit: persons)

Year	Gender		Age			Region	
	Male	Female	30 years old and below	31-50 years old	51 years old and above	Southern Region	
2020	709 (57.2%)	530 (42.8%)	166 (13.4%)	569 (45.9%)	504 (40.7%)	2020	899 (72.6%)
2021	698 (57.3%)	520 (42.7%)	178 (14.6%)	526 (43.2%)	514 (42.2%)	2021	873 (71.7%)
2022	701 (57.9%)	509 (42.1%)	158 (13.1%)	558 (46.1%)	494 (40.8%)	2022	874 (72.2%)

*Southern Region covers Pingtung County, Kaohsiung City, Tainan City, Chiayi City, Chiayi County, and Penghu County.



Southern Region Outside Southern Region	
2020	325 (26.2%)
2021	332 (27.2%)
2022	320 (26.5%)

*Outside Southern Region includes Northern Region, Central Region, Eastern Region, Kinmen County, and Lianjiang County.

Overseas	
2020	15 (1.2%)
2021	13 (1.1%)
2022	16 (1.3%)

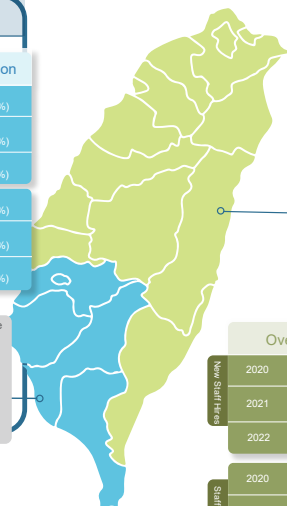
New Staff Hires and Staff Turnover in Past 3 Years by Gender, by Age, and by Region (unit: persons)

Year	Gender		Age			Region	
	Male	Female	30 years old and below	31-50 years old	51 years old and above	Southern Region	
2020	39 (5.0%)	27 (3.4%)	13 (1.7%)	42 (5.4%)	11 (1.4%)	2020	38 (4.8%)
2021	18 (2.4%)	1 (0.1%)	9 (1.2%)	23 (3.1%)	4 (0.5%)	2021	27 (3.6%)
2022	12 (1.5%)	12 (1.5%)	4 (0.5%)	16 (2.0%)	4 (0.5%)	2022	10 (1.3%)

New Staff Hires

Staff Turnover

*Only full-time staff were included: Full-time academic and administrative staff (including staff within the staff complement, campus police, mechanics, school workers, drivers) and contract staff.



Southern Region Outside Southern Region	
2020	26 (3.3%)
2021	9 (1.2%)
2022	14 (1.8%)

Overseas	
2020	1 (0.1%)
2021	5 (0.7%)
2022	22 (2.8%)

*Rate of new staff hires and employee turnover: (Number of new staff hires/staff turnover in the year) ÷ (Total number of full-time academic and administrative staff in the year) × 100%

Overseas	
2020	2 (0.3%)
2021	—
2022	—

Overseas	
2020	—
2021	—
2022	—

● Remuneration and Promotion

To protect the human rights of academic and administrative staff, promote labor-management harmony, and build a friendly workplace environment, we have established applicable regulations in compliance with the civil service laws and regulations, and regulations in compliance with the *Labor Standards Act* for school workers and contract staff.

The compensation for full-time academic staff and research staff is based on the “Salary Structure for Full-Time Academic Staff of Public Universities” to comply with the payment regulations of the Ministry of Education. The compensation of full-time administrative staff is based on the “Directions for Salary Payment of Nationwide Military, Public Service, and Teachers”. The compensation for contract staff is based on the “NPUST Contract Staff Salary Payment Standard” regardless of gender. However, the salary of the same pay grade may vary due to seniority and duty allowances.

The ratio of the annual total compensation for the highest-paid individual to the median annual total compensation for all staff is at 1-3. The compensation for all academic and administrative staff is subject to raise according to the raise for civil service by the government.

Ratio of Annual Total Compensation in Past 3 Years

Category	Job Title/Year	2020	2021	2022
Full-Time Staff	Academic Staff	2.056	2.276	2.717
	Administrative Staff	1.936	1.760	1.820
	Administrative Assistants	1.262	1.242	1.184

*Included full-time staff only.

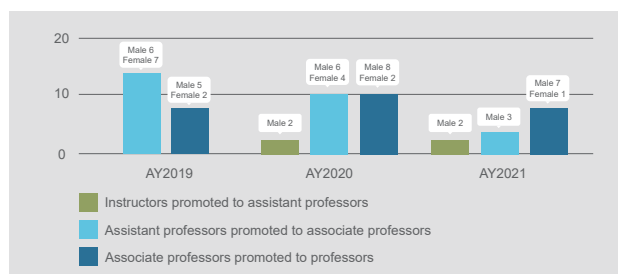
*Ratio of annual total compensation: Annual total compensation for the organization's highest paid-individual/Median annual total compensation for all of the organization's employees (excluding the highest-paid individual)

The raise and promotion of academic staff are subject to the “NPUST Regulations for Assessment of the Appointment and Promotion Full-Time Academic Staff” and “NPUST Regulations for Appointment and Promotion

of Extra-Complement Full-Time Academic Staff”. The promotion of academic staff is assessed through the on-campus preliminary and second reviews, off-campus expert review, and on-campus final review based on their professional achievements and performance in teaching, research, service, and student advising. A total of **55** teachers passed the promotion assessment in the past three academic years.

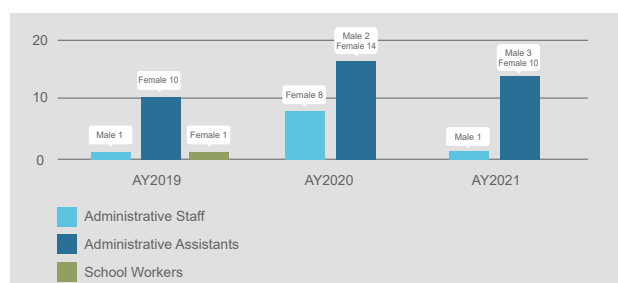
We established the “NPUST Instructions for Staff Selection, Promotion, and Transfer” in accordance with the *Civil Service Promotion Act*, *Enforcement Rules of the Civil Service Promotion Act*, and *Scoring Sheet for Promotion of Civil Service of the Executive Yuan and Its Government Agencies and Government Schools*. The promotion and transfer of staff are subject to the Instructions in a fair, impartial, and open manner. A total of **54** school workers and contract staff received a promotion in the past three years.

Number of Academic Staff with Promotion in Past 3 Academic Years (unit: persons)



*Including full-time and project academic staff.

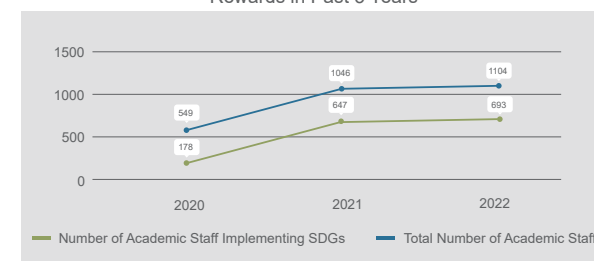
Number of Staff/Contract Staff with Promotion in Past 3 Academic Years



● Rewards and Benefits

To develop talents and recruit and retain top talents with excellent performance, we have established the relevant regulations to raise the standard and effectively improve the overall teaching quality and academic achievements of academic staff with incentives, encouragements, and rewards and reward and subsidize them with the relevant funds. A total of 2,699 persons received flexible pay and academic rewards with a total amount of over NT\$86.18 million in the past three years. Additionally, flexible pay is granted to encourage teachers with distinguished performance in USR education promotion and SDG-related affairs. A total of 1,518 persons received flexible pay amounting to over NT\$26.58 over the past three years. The amount of compensation in 2022 was 5% higher than that of 2020.

Number of Academic Staff Receiving flexible pay and Academic Rewards in Past 3 Years



To reward staff with outstanding performance, we organize outstanding staff, outstanding administrative assistant, and outstanding school worker selection in accordance with the “NPUST Instructions for Selection and Reward of Staff with Outstanding Performance” and “NPUST Instructions for Rewarding School Workers with Outstanding Performance”. A total of **29** staff, administrative assistants, and school workers were rewarded with a total of **NT\$115,000** in the past three years.



We arrange insurance for all full-time academic and administrative staff (excluding part-time staff) in accordance with the *Civil Servant and Teacher Insurance Act* and the *Labor Insurance Act* to ensure pension protection by seniority after retirement. Full-time academic and administrative staff are also entitled to the parental leave, family care leave, continuing education leave, and leave for other matters. They may also apply for the leave of absence in accordance with the *Regulations Governing Unpaid Leave of Absence for Civil Service*, *Regulations Governing Unpaid Leave of Absence for Teachers*, and *Regulations for Implementing Unpaid Parental Leave for Raising Children* and return to work and resume payment after the leave or the extinguishment of the reasons for the unpaid leave of absence. **The return to work and retention rates of employees of academic and administrative staff after parental leave in the past three years are all 100%.**

Status of Parental Leave of Full-Time Staff in Past 3 Years (unit: persons)

	Gender	2020	2021	2022
Number of employees that were entitled to parental leave	Male	7	5	10
	Female	24	14	18
Total number of employees that took parental leave	Male	0	2	1
	Female	3	14	8
Staff due to return to work after taking parental leave (A)	Male	0	1	1
	Female	6	4	2
Staff who did return to work after parental leave	Male	0	1	1
	Female	6	4	2
Employees retained 12 months after returning to work following a period of parental leave (C)	Male	0	1	-*
	Female	6	4	-*
Return to work rate (B/A)	Male	-	100%	100%
	Female	100%	100%	100%
Retention rate (C/B)	Male	-	100%	-
	Female	100%	100%	-

-*Returning to work for less than 12 months in that year.

● Friendly Campus

— Harmony and Health

1. Enhancing friendship exchange between academic/administrative staff and students

We provide great sports facilities and space for academic and administrative staff and students to use by online booking during the lunch break and after school. We also organize various activities, such as student advisor training camps, officer team building, mechanic training camp, year-end party, school anniversary grassland concert, concerts, fairs, and academic and administrative staff competitions in the school anniversary sports meet, to promote friendship exchange between academic and administrative staff.



▲ 2021 "Love, Joy, Peace" Christmas Tree Lighting. [Further reading](#)

2. Protecting physical and mental health of academic/administrative staff and students

To build a healthy campus, we have established the Center for Health Consultation and Promotion to comprehensively assess the health promotion needs of students and academic and administrative staff; guide students and academic and administrative staff to voluntarily and autonomously develop health management through health education, activities, health services by combining with community resources; and offer physical and mental health promotion and healthcare services on campus to all academic and administrative staff and students.

Statistics of Health Promotion Activities in Past 3 Years (unit: persons)

Issue/Year	2020	2021	2022
Healthy Body Weight with Metabolic Syndrome Prevention	1,103	1,063	680
Tobacco Hazard Prevention with No-Smoking Campus and Anti-drug	783	11,916	802
Sex Education with AIDS Prevention	1,646	982	951
Self-Imposed Health Management	16,359	195	86
Healthy Life for Elderly Students	57	0	0
Self-Defence Training	144	88	0
Campus Drug Abuse	0	0	28
Total	20,092	14,244	2,547

3. Stress Relief Center and Spa & Beauty Center for academic and administrative staff to relieve physical and mental stress

We equip the "Academic and Administrative Staff Stress Relief Center" with two visually impaired masseurs to provide massage service on weekdays. As a favorite service of academic and administrative staff, the center is always fully booked and has served 3,724 persons in the past three years.

We also establish the [Spa & Beauty Center](#) for students of the Department of Fashion Design and Management to practice by providing academic and administrative staff and students with services including Thermage® CPT, stress-relieving massage, instrumental weight loss, and manicure after school for staff to maintain beauty after work.

Service at the Spa & Beauty Center. ▶



– Communication Optimization

Academic staff established the “Teachers’ Unions” in accordance with the *Civil Associations Act* and *Teachers’ Act* in 2006. Contract staff appoint school representatives in accordance with the *Labor Standards Act* and *Regulations for Implementing Labor-Management Meeting* and elect contract staff representative to hold the “labor-management meeting”. Students organize the “Student Union and Student Council”. Various robust communication platforms are thus established.

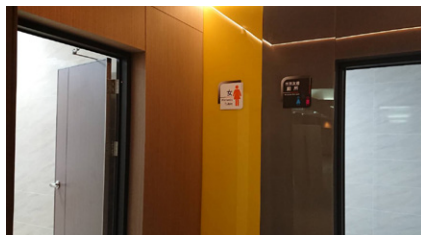
Although there is no labor union at NPUST, we have established the “Faculty Grievance Review Committee”, “Staff Grievance Review Committee”, and “Student Grievance Review Committee” to review related grievances and provide platforms for opinion expression and defense. During AY2019-2021, we received one faculty grievance; **zero staff grievance; and 23 student grievances** and held 14 review meetings to protect the rights and interest of academic staff and maintain the learning, living, and education rights and interests of students.

– Gender Equality and Well-Being

1. Promoting gender equality and anti-bullying

To promote substantive gender equality, we have specifically establish the **Gender Equality Education Committee** in accordance with the *Gender Equity Education Act* and set up a website to publish and publicize relevant information.

To develop civic literacy featuring the respect for human rights and gender equality in students, we



▲ Establishment of gender-friendly restrooms for a more inclusive environment.



▲ Website of the Gender Equality Education Committee

plan and implement courses and activities in relation to gender equality and establish the “NPUST Instructions for Organization of Gender Equality Education Committee”, “NPUST Regulations for Campus Bullying Prevention”, “NPUST Regulations for Prevention, Grievance, and Disciplinary Action of Sexual Harassment at Workplace for Academic and Administrative Staff”, and “NPUST Instructions for Prevention of Campus Sexual Assault, Sexual Harassment, and Sexual Bullying” to **build a safe, discrimination-free friendly campus space**.

Statistics on Courses Relating to Gender Equality and Anti-Bullying

Course Type	Academic Year Number of Courses	Number of Participants		
		2019	2020	2021
Rule of Law	34	3,648	5,197	4,635
Workplace Ethics	37	1,566	2,604	2,766
Gender Equality	32	2,731	3,041	2,839

To maintain human rights and employment equality and ensure the employment rate of persons with disabilities of no less than 3% of all employees, **we have hired persons with disabilities at a rate higher than the statutory requirement over the past three years to create a workplace environment of equal rights in employment and without discrimination**.

Number of Academic and Administrative Staff with Disabilities in Past 3 Years (unit: persons)

Year	Number of employees with disabilities due to hire	Number of employees with disabilities actually hired		
		Male	Female	Total
2020	45	25	24	49
2021	46	24	24	48
2022	43	23	22	45

2. Valuing Employee Well-Being

We run the “NPUST Non-Profit Kindergarten for Employees’ Children” on-campus and accept the children

and grandchildren of academic and administrative staff in top priority for them to focus on work so as to create a parent-friendly workplace. Additionally, the Center for Teacher Education signed a contract with the National Experimental High School at Pingtung Science Park in 2022 to include the children of NPUST academic and administrative staff as “park students” to enjoy priority acceptance of the kindergarten, elementary school, junior high school, and senior school sections of the school.

NPUST academic and administrative staff are entitled to the benefits covering the allowances for marriage, funerals, birthday, birth, injury and illness; emergency assistance; emergency loan, continuing education allowance; children’s education scholarships and grants; group insurance; home loans for civil service and teachers; condolence money for retired academic and administrative staff; campus tuck shop visits, environmental education and training, and others. Academic and administrative staff within the complement are also entitled apply for accommodation in the Coconut Park and NPUST Guesthouse, and NPUST stakeholders and personnel engaging in short-term business exchange with NPUST are entitled to apply for accommodation in our any of our six practice lodges and our practice hotel. This whole section is extremely disorganized, can’t really understand what the real benefits are.



▲ Performance of the kindergarten students at the Lunver New Year reunion

● Career Development and Cultivation of Academic and Administration Staff

NTUST academic and administration staff are divided into academic staff (including full-time and part-time academic staff and research staff) and administrative staff (including staff, campus police, mechanics, school workers, drivers, and administrative assistants). By 2022 the rate academic staff holding a master's or higher degree is 98.62%, including 88.48% holding a PhD degree. Academic staff within the complement are mostly professors, with a rate of over 40% in the past three years. We promote career development and cultivation to academic and administration staff, develop a flexible pay scheme to reward teachers with excellent performance, and fund teachers to strive for external research projects to realize the education for employment feature of TVET.

In accordance with Article 26 of the *Technical and Vocational Education Act*, a total of 294 TEVT academic staff should complete related professional field study or research. In AY2021 the completion rate of professional field study or research of TEVT academic staff was 100%. To improve teaching quality, we have organized 287 teacher growth training activities in the past three years for 10,093 academic staff. To encourage administrative staff to improve the quality and enhance the efficiency of service through e-learning, they are required to take the service-related training for 20 hours and training for 80 hours each academic year. Additionally, those completing service-related training for up to 40 hours and training for up to 100 hours through e-learning in an academic year will be rewarded.

Improvement Plans for Teacher Growth Training Activities with Unaccomplished Annual Targets (over AY2019)

Item/Academic Year	2020
Teacher growth and training activities	14 sessions less
Improvement Plan	The number of teacher growth training activities reduced due to COVID-19. However, additional activities have been held to improve the teaching quality of academic staff since AY2021 when the pandemic began to slow,

Statistics on Teacher Growth Training Activities in Past 3 Academic Years

Academic Year	Number of Activities	Number of Hours			Number of Participants		
		Physical	Virtual	Total Number of Hours (Physical + Virtual)	Male	Female	Subtotal
2019	84	181.0	12.0	193.0	1,495	1,174	2,669
2020	70	173.5	8.0	181.5	1,323	1,221	2,544
2021	133	137.5	160	297.5	2,458	2,422	4,880

*Each teacher must participate in at least six teaching-related training activities during each 3-year evaluation.

Education and Training for Staff in Past 3 Academic Years

Academic Year	Number of Hours			Number of Participants/Average Hours of Training			
	Physical	Virtual	Total Number of Hours (Physical + Virtual)	Male (Persons)	Average Training Hours	Female (Persons)	Average Training Hours
2019	2,205	3,925	6,130	555	20	1,110	21
2020	3,569	7,218	10,787	1,550	60	2,445	84
2021	3,048	5,126	8,174	1,534	55	1,839	62

*Administrative staff include civil service, administrative assistants, campus police.

Career Development and Cultivation of Academic and Administrative Staff in Part 3 Years

Cultivation Measures	Quantitative Performance
Flexible Pay Reward	Number of recipients: 1680 (male)/635 (female) Amount of reward: NT\$66.02 million
"Innovative Teaching" and "Social Responsibility Teaching" Distinguished Teacher Award	Number of recipients: 85 persons Amount of reward: NT\$5.6 million
R&D Capacity Cultivation for Academic Staff and Research Staff	Funding: NT\$90.34 million Amount of projects won: NT\$2,905,220,000
R&D Capacity Cultivation for New Academic Staff	Number of recipients: 47 persons Funding: NT\$7.84 million Amount of projects won: NT\$34.28 million
Research Team Funding Policy	Number of new academic staff participated: 78 persons Percentage in overall new academic staff: 53% Amount of projects won: NT\$95.04 million
Faculty Field Engagement for Enhancement of University-Industry Link	Number of academic staff due to training: 294 persons Actual number of academic staff completing training: 294 persons Training completion rate: 100%
Teacher Growth Seminar Series	Number of seminars: 287 Number of hours: 672 Number of participants: Male: 5,276/Female: 4,817
Teacher Professional Learning Communities	PBL instruction: 137 projects Innovative instruction: 99 projects
Employee Learning Mechanism	Number of hours: 25,091 Number of participants: Male: 3,639/Female: 5,394



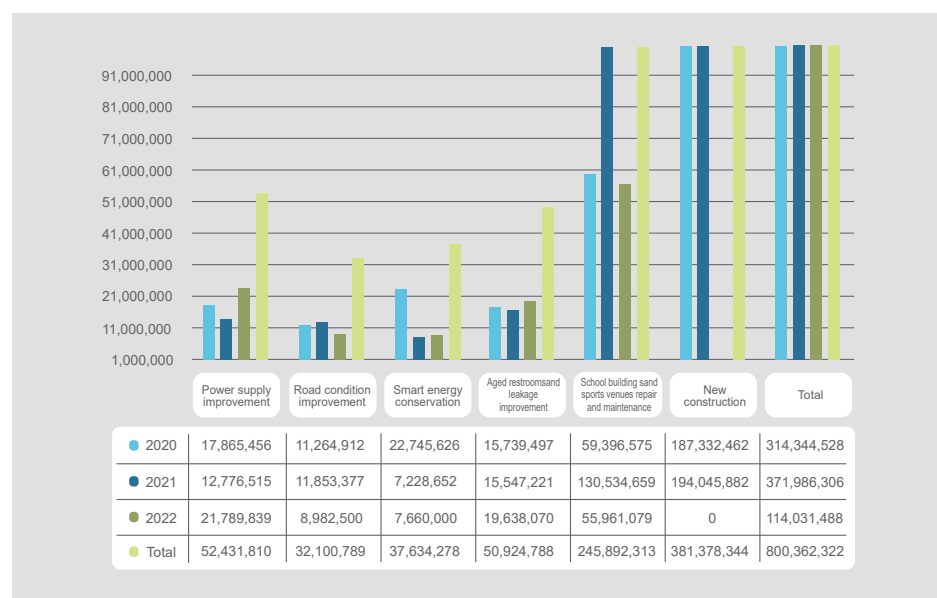
◀ In 2018 we co-established the "Economic Animal International Technical Talents Cultivation" academy with Dalum Academy of Agricultural Business of Denmark, and nine academic staff completed training in Denmark in 2022.

► 2-2 Campus Infrastructure and Hardware/Software Facilities 4.7 GRI2-4,G101 | Material Issue G06

● Optimizing Teaching Space and Facilities

We have relocated the main campus to the Neipu Campus for 30 years, and many campus facilities are aged. To optimize campus infrastructure and hardware/software facilities and provide an excellent teaching, research, and learning environment, we increase the investment of university endowment fund in teaching quality and facility improvement every year to fully support teaching, R&D, university-industry collaboration, and campus maintenance and updating.

Construction and Repair Funds in Past 3 Years (unit: NT\$)



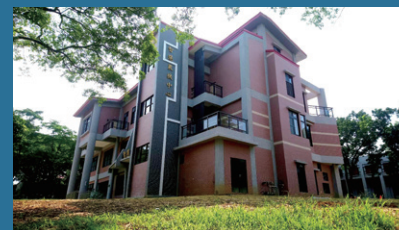
(Information restatement: The actual amount of repair expenses for 2020 has changed: The amounts for aged restrooms and leakage improvement, school buildings and sports venues repair and maintenance, and new construction were updated.)

Improvement Plans for Infrastructure and Hardware/Software Facilities with Unaccomplished Annual Targets (over 2020)

Item/Year	2022
Expenditure on hardware and software facilities	Reduced by 63.7%
Improvement Plan	The new construction projects for promoting key feature development were all completed in 2021. In the future we will actively strive for self-raised funds and government subsidization for promoting the teaching space and facilities for campus sustainable development.

● Optimizing interdisciplinary teaching equipment and buildings

The rise of AI, IoT, and big data technologies have started an intelligent revolution in traditional agriculture. Starting out as a professional school of agriculture, we have incorporated the spirit of Industry 4.0 into agriculture in recent years. To promote our four feature development themes, we have engaged in the talents development, R&D, university-industry collaboration, and need for social services in relation to “agricultural production”, “environment and ecology”, “elderly well-being”, and “social responsibility” in SDGs; and built the Intelligent Agricultural Machinery Center, the Sustainability R&D Center to incorporate renewables and digital trends into various construction projects and teaching, the Aquaculture and Conservation Center to develop novel and more competitive species, and the Fitness and Sports Industry Talents Development Base to develop the comprehensive expertise of students. Apart from offering students with comprehensive learning venues to connect with the industry, we also align with the SDGs, correspond to the global cooperation for net zero emissions, and implement sustainable school governance approaches to develop the hard power of students towards the future carbon credit world.



Intelligent Agricultural Machinery Center Sustainable Agriculture Research Base



The Sustainable Circular Economy R&D Center incorporates renewables and digital trends into various construction projects and instruction.



The Fitness and Sports Industry Talents Development Base develops the comprehensive expertise of students.



The Aquaculture and Conservation Center cultures quality aquatic seedlings.

● Building Industry-Grade Practice Venues

To improve the teaching infrastructure for the digital age, we have built related practice venues and improved various practice venues with the funds from the Higher Education SPROUT Project, subsidization of other MOE projects, and university endowment funds to develop students' practical experience in operations and management.

Venue name	Amount of Investment (NT\$10 thousands)	Description
Industrial Robot Interdisciplinary Teaching Laboratory	1,000	Apart from being Taiwan's first venue for the practical examination of robot engineers accredited by the Taiwan Automation Intelligence and Robotics Association (TAIROA), the lab is also the training base for students taking the license examination.
The venue of the practical examination for the iPAS Smart Production Engineer (SPE) license.	200	Develop "lean production" and "smart manufacturing" core technologies, including the manufacturing execution system (MES) and the programmable logic controller (PLC), to connect with the industry and deepen the employment competence of students.
AR/VR Digital Classroom	250	Improve students' capabilities in fundamental courses and practical operation with digital teaching materials and environments; purchase graphics workstations, LDC displays, and independent VR equipment, and the virtual environment and equipment for developing VR equipment; and enrich course teaching contents through VR.
Wood Processing Factory	255	Prepare and plan a practice and operation site with seven qualified testing areas to help students pass the carpentry grades B and C licenses.
iPAS 3D Printing Examination Venue	137	Build the professional examination venue for the iPAS 3D Printing (Additive Manufacturing, AM) engineer license for students to engage in interdisciplinary skill integration together with professional 3D printing.



▲ Industrial Robot Interdisciplinary Teaching Laboratory



▲ The venue of the practical examination for the iPAS Smart Production Engineer (SPE) license.



▲ AR/VR digital equipment



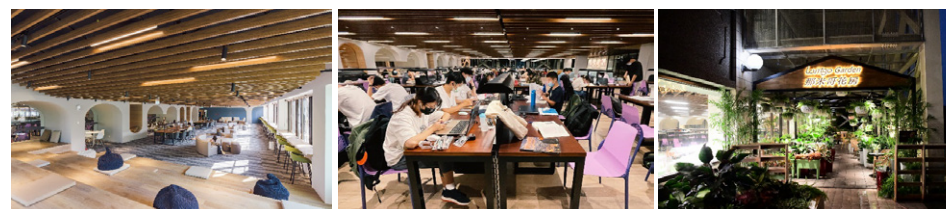
▲ Remodeling of the Department of Wood Science and Design workshop

● Quality Library Resources

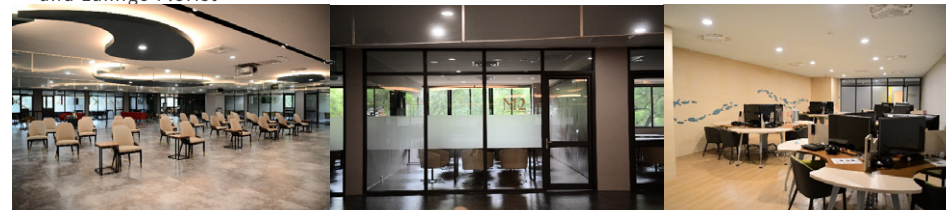
Based on the Knowledge Tree concept, the NPUST Library and Exhibition Hall organize big cultural and art events through spatial planning to create the "knowledge forest" living space.

Spatial planning: In AY 2021 we opened the "Happiness, Intelligence, and Freedom Idea Development Center" to optimize the venue to facilitate the role change and interdisciplinary learning of students. Lagoon Bookstore, and Lagoon Florist were sponsored by businesses through in-kind donation to fuse the "aquaponics" and "horticultural therapy" features of our smart agriculture to create a comfortable and great reading environment and atmosphere.

In addition of hardware modification, we also actively empower new space with "soft power". Every month the library purchases new books according to the "Choice of elite" for teachers and students to enjoy the same reading sources in pace with the urban areas so as to "home elite Bookstore in NTUST Library". As a result, the student book borrowing rate has increased significantly. We increase the digital library collection and digitize library resources through database expansion. In AY2021 the digital collection (e-books) was 1,219,640 volumes. By actively increasing the channels for resource use, the e-resource clicks increased to 1,446,041 times, enhancing the e-library resource service. Additionally, we have organized events, including the "Southerly Reading Season" and "Jingshihu Literature Award", to remind teachers, students, and readers of the charm of reading.



▲ Remodeled the reading room on the first floor into Hong Pu Reading Room, Lagoon Bookstore, and Lamigo Florist



▲ Remodeled the reading room on the first floor into Hong Pu Reading Room, Lagoon Bookstore, and Lamigo Florist



NPUST Library and Exhibition Hall website



SDGs e-Book Corner



NPUST Library and Exhibition Hall news report: GVM

● Software Facilities for Empowering Foreign Language Proficiency

The Foreign Language Teaching Division, Language Test & Equipment Division, and Chinese Division are established in the NPUST Language Center to plan the general English and foreign languages courses for the whole school.

The Center is equipped with seven language laboratories. Apart from being the venue for English courses and second foreign language courses, these labs are also the language test venues from time to time. In the past three years, these labs have trained 12,882 students and persons. The language labs are planned by course into the language test lab, multilingual lab, professional foreign language lab, and foreign language self-learning area. The Center also purchases the online test learning platforms, including the online question bases for TOEIC, GEPT, IELTS, and iBT. In addition to the English-related language test resources, the Center has been enriching the book resources for second foreign languages (e.g., Japanese, Korean, and Southeast Asian languages) in recent years.

The Language Center also signed an agreement on Southeast Asia language tests and teaching collaboration with Wenzao Ursuline University of Languages to encourage more NTUST students studying Southeast Asia languages to take the language test to facilitate the overseas internships, career development in those countries, and pursue further study in the future of NPUST students.



▲ Students use equipment in the Language Center



▲ The Language Center signed a MOC for language test with Wenzao Ursuline University. [Further reading](#)



▲ The Language Center organized the "2022 Quick Language Exchange & Xmas Present" event to increase the opportunities for learning and exchange between domestic and international students. [Further reading](#)



▲ The Language Center organized the "Tanzaku Wish Campus Festival + Monster Mask Painting" for students to experience the Japanese culture. [Further reading](#)

● Sports Facilities

At NPUST, there are 26 indoor and outdoor ballgame facilities in total. In addition to the ballgame learning venues for students and the ballgame training sites for sports majors, they are also opened to the public, senior high schools and vocational high schools, and groups for booking. The 2022 University Basketball Association Competition was also held in NPUST. By sharing our quality sports venues with others, we achieve the goal of resource sharing.

In addition to developing excellent talents, we emphasize more on the health of students. With well-planned campus sports facilities, we motivate teachers and students to exercise. With the subsidization of the Sports Administration, MOE, and our matching fund, we spent a total of NT\$9 million on upgrading the grade D baseball field into a safer, more professional grade C baseball field where competitions can be held. To fulfill USR, we team up with the nearby elementary, junior high, and senior high schools for sports talents to receive integrated, uninterrupted training so as to make records for Taiwan's sports. In 2022 our "slow pitch softball" and "fast pitch softball" teams won the university championships, particularly the former, we have been the champion for five consecutive years.

List of NPUST Indoor and Outdoor Sports Facilities

Indoor Sports Facilities		Outdoor Sports Facilities	
Facility Name	Quantity	Facility Name	Quantity
Basketball Site	3	Basketball Court	8
Badminton Court	9	Volleyball Court	8
Physical Fitness Center	1	Tennis Court	8
Table-Tennis Classroom	1	Soccer Field	1
Spinning Bike Field	1	Softball/Baseball Field	1
Martial Arts Classroom	1	Swimming Pool	1
Multifunctional Classroom	1	Track and Field Stadium	1
Physical Fitness Center	1	Woodball Course	1
		Golf Practice Course	1
		Outdoor Adventure Education Site	1

▼ 2020 University Academic and Administrative Staff Slow-Pitch Softball Championship [Further reading](#)

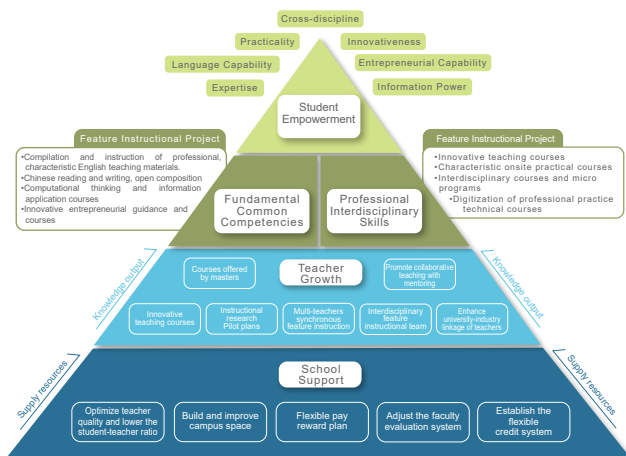


▼ Academic staff joined the opening ceremony of the grade C baseball field. [Further reading](#)



► 2-3 Teaching Innovation and Teaching Quality 2.1 4.3 4.5 4.7 4.b G102 | Material Issue G07

To realize teaching innovation and improve teaching quality, our strategies cover three aspects: school support, teaching growth, and student empowerment to broaden the learning freedom and horizons of students and develop multidisciplinary and professional “pi-shaped” talents integrated with humanistic qualities, social care, and leadership.



We implement the execution strategy for the innovation and quality improvement of teaching.

● Efficacy in Teaching and Learning Capacity Enhancement

In the past three years, we have implemented a total of 424 projects progressively for teaching innovation and teaching quality improvement by teaching feature team, with excellent performance in teaching capacity enhancement and student learning empowerment.

Efficacy of Teaching Innovation and Teaching Quality in Past 3 Years (1/2)

Aspect	Teaching Innovation Item	Efficacy
School Support	Optimize academic staff quality by reducing the student-teacher ratio.	Annually Reducing Student-Teacher Ratio 23.04 on AY2020 and 21.81 in AY2021.
	Campus Space Construction and Improvement	The number of projects in 2022 increased by 40% over 2020.
	Flexible Pay Reward Plan	Teacher of excellence in innovative teaching: 42 persons Teachers with distinguished performance in USR education promotion: 43 persons
	Grade promotion diversification for academic staff	Promotion by instruction report: 4 persons; promotion by technical report: 1 person; promotion by works: 2 persons.
	Flexible credit policy	Education-employment integration rate 78%

Efficacy of Teaching Innovation and Teaching Quality in Past 3 Years (2/2)

Teacher Growth	Innovative teaching courses Solving industry problems	Number of courses in 2022 over 2020 ▲43%, number of students in 2022 over 2020 ▲43%
	Teaching research pilot project	MOE-subsidized teaching practice research projects: 6 projects
	Multi-teachers synchronous feature instruction	Learning satisfaction: 92.24 marks (out of 100)
	Interdisciplinary feature teaching team	Interdisciplinary professional TVET courses: Before 3.68 marks, After 4.01 marks
	Professional field study or research of TEVT academic staff	Completion rate 100%
Student Empowerment	Instruction of distinguished professors	Winners of Taiwan Top Ten Agricultural Experts: No. 1 among USTs National Award for Distinguished Contribution to Industry-Academic Cooperation Number of winners in agricultural science, biotechnology, nursing: No. 1 in Taiwan
	Promotion of practice-based instruction Mentoring collaborative teaching	AY2021 over AY2019 Number of courses ▲27%, number of mentors ▲25%, student satisfaction 87%
	Feature onsite practical courses	Education-employment integration rate 78%
	Increasing facilities for practical teaching Building industry-grade practice venues	Developed 2 winners of the Outstanding Award of Technological and Vocational Education
	Establishment of the College of Professionals Cultivate multifaceted practical skills	Number of courses in AY2021 over AY2020 ▲28%
	University-industry collaborative teaching Pass on workplace practical skills	Number of courses in 2022 over AY2020 ▲6%
	Enhancement of TA training Improve the teaching and learning efficacy of practical courses	Courses with TA: Higher GPA for students
	Flexible credit scheme Encourage cross-disciplinary course selection	Number of students selecting course across disciplines: 3,570 persons
	Innovation and entrepreneurship courses	Number of awards from competitions: 26 awards, entrepreneurial reward: NT\$5.963 million
	Systemic development of innovation and entrepreneurship talents through the Innovation and Entrepreneurship Academy	Received monetary rewards NT\$5.963 million
	Programming courses for non-IT disciplines Digital value addition of professional knowledge	Innovation and Creativity Competition Honorable Mention, Hackathon Best Technology Award
	Develop fundamental program application capability with the Computational and Logical Thinking course	Programming competition for non-IT (EEng) students: No. 1
	Design and development competitions and activities	The Department of Management Information Systems won No. 1 in the AIoT Application category; students of the Department of Mechanical Engineering won the Professional Application Award in the "Smart Factory Management System".
	Enhancement of Chinese narration, reading, and compositional abilities.	Rate of students with progress in Chinese reading and writing abilities ▲98%
	Art and cultural activities and competitions Enrich the cultural literacy of students	Awards: Prose 24 students, Diagram text: 24 students Total amount of rewards: NT\$51,000
	Improvement of proficiency of professional foreign languages	Rate of students with improvement 92%
	Interdisciplinary professional license training courses	Number of licenses: 6,091 Rate of upper intermediate and single-level certificates in all certificates: 88%

● Increasing access to higher education and optimizing student assistance mechanisms

We began receiving funding from the MOE Higher Education SPROUT Project in 2018 to develop learning assistance mechanisms for economically and culturally disadvantaged students. In addition to diversifying admission channels to provide discounts for economically disadvantaged students, we also implement well-planned study assistance measures to help economically disadvantaged students admission test aid and test assistance to enhance their willingness to take admission tests and attend school. We also arrange study-at-ease guidance and assistance for them after admission and build the learning grant and multi-disciplinary skill learning mechanisms to improve their interdisciplinary capability and employability.

— Complete Assistance for Study at Ease

1. Discount for registration fee

The right to education is protected for economically or culturally disadvantaged students by expanding from economic aid to admission opportunity protection. We offer registration fee discounts for admissions to the undergraduate and graduate programs to students from low-income and medium-low income families, including free registration to the former group and 60% off to the latter group. During AY2019-2021 we funded a total of 734 students with a total of NT\$412,360.

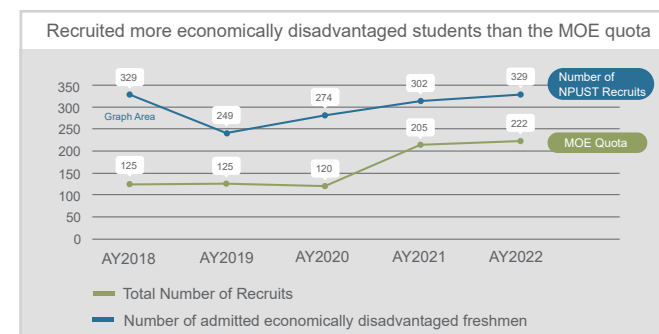
Statistics on Fundings of Registration Fees for Economically Disadvantaged Students in Past 3 Academic Years (unit: NT\$)

Examination/Number of Students and Amount of Funding	AY2019		AY2020		AY2021	
	Persons	Total Amount	Persons	Total Amount	Persons	Total Amount
Registration Fee for School Transfer Examination	35	17,400	37	17,400	32	16,080
Registration Fee for Stage 2 Selection Test of Four-Year Technical Programs	61	33,750	193	120,750	237	95,700
Registration Fee for Stage 2 Admission Test of Four-Year Technical Programs	13	9,520	8	600	15	1,180
Registration Fee for Special Talents Selection and Sports Talents	9	5,900	3	440	11	1,880
Registration Fee for Selection Test of Master's Programs	22	20,640	19	17,520	15	14,640
Registration Fee for General Entrance Examination of Graduate Programs	14	18,520	9	9,240	10	11,200
Total	154	105,730	269	165,950	320	140,680

*Economically or culturally disadvantaged students in this table do not include students from low-income and medium-low income families, students from families in hardship, indigenous students, and students with disabilities.

2. Protection of admission opportunities with preferential measures

In consideration of the lack of extracurricular learning resources of economically or culturally disadvantaged students, in the prospectus we reserve guaranteed quota for students with disabilities, indigenous students, students from medium-low income families, vision in-service program, and extra points for the total score of new-resident students to increase the admission opportunity of these students. During AY2019-2021, a total of 825 economically or culturally disadvantaged students were admitted to NPUST. The acceptance rate increases each year to **even higher than the MOE-approved quota**.



3. Implementing the Vision Project for economically or culturally disadvantaged students to flip their life

We offer the Smart Mechatronics Bachelor's Vision Project Program to provide diversified admission channels and opportunities for studying at national universities. Reinforced teaching, such as group academic reinforcement, digital-assisted learning, individual academic tutoring, and student career guidance, is arranged for students enrolled on the program, and various reward and funding measures are offered. In AY2021 the Vision Project was implemented in the Department of Biomechanics Engineering and accepted nine economically or culturally disadvantaged students. In AY2022 the Smart Mechatronics Bachelor's Vision Project Program began recruiting students and accepted 24 students, including three economically or culturally disadvantaged students.

4. Meal tickets for student assistance

To reduce the food expense burden of economically disadvantaged students and encourage them to study, every year the contractor of our First Restaurant sponsors meal tickets (NT\$50 each) for economically disadvantaged students with a total of NT\$20,000, offers them scholarships amounting to NT\$100,000, and introduces the point collection activity with prizes including free meal tickets of NT\$100,000. The campus convenience stores also sponsor a total of NT\$52,000 each year for students to apply.

5. Multi-channel funding for economically or culturally disadvantaged students

We offer multi-channel funding, including tuition and fee funding, student hall discount, grants for students from low-income families, and various scholarships and grants, to support economically or culturally disadvantaged students to study at ease. Every year we appropriate **8%** of balance of the total tuition and fees deducting the exempted tuition and fees as student scholarships and grants and reduce or exempt the tuition and fees of students from low-income families, indigenous students, and students with disabilities. The total amount is much higher than the **3%** MOE contribution. During AY2018-2021, we funded a total of 41,324 students through various channels with total amount of scholarships and grants of over NT\$31 million. We also actively raised funds from society as the exclusive scholarships for students with excellent performance or from low-income families to fund a total of 388 students with a total amount of NT\$5.58 million.

Multi-Channel Funding for Economically or Culturally Disadvantaged Students in Past 3 Academic Years

Fund Source	Funding Item	Number of Recipients	Amount of Funding (NT\$ 10 thousands)
Self-Raised Funds	Tuition and Fees Funding	6,262	11,357
	Grants	11,553	10,217
	Scholarships	17,357	6,648
Government Subsidization	Grants	5,764	3,039
Donation	Exclusive Scholarship	388	558



▲ Chair Professor Academician Chang-Hung Chou Scholarship for Students from Low-Income Family



▲ NPUST Alumni Culture and Education Foundation Scholarship



▲ La New Scholarship for Students with Excellent Performance in Agriculture or Culturally Disadvantaged Students



▲ Hong Pu Construction Corporation--Alumnus Chin-Hua Tun Scholarship

— Academic Tutoring

1. Multifaceted capability learning

Study groups, academic tutoring, TAs, and various talents development courses under the MOE Higher Education SPROUT Project are prioritized for economically and culturally disadvantaged students. Since the study group was introduced in AY2018, over 60% of departments and institutes have applied for study group establishment to eliminate the learning divide of economically or culturally disadvantaged students.

Number of Applicants by College in Past 3 Academic Years

Academic Year	College of Agriculture	College of Engineering	College of Management	College of Humanities and Social Sciences	College of Veterinary Medicine	Number of Applicants
2019	78	67	62	52	13	272
2020	80	75	72	54	14	295
2021	108	96	116	81	3	404
Total	266	238	250	187	30	971

2. Alert system for students with poor learning efficacy

Alert, guidance, and follow-up measures are implemented on students with poor learning efficacy. Over 95% of students with poor learning efficacy have made improvement after the guidance in the past three academic years. These measures also help lower the suspension rate.

Alert, Guidance, and Follow-up Measures for Students with Poor Learning Efficacy

Academic Year	Students Number of Students (Undergraduate) (A)	Number of Alerted Students (B)	Number of Students with Improvement After Guidance (C)	Improvement Rate (C/B)%	Suspension Number of Students (D)	Suspension Rate Suspension
2019	7,749	2,763	2,597	93.99	209	2.69
2020	7,712	3,176	3,019	95.06	213	2.76
2021	7,626	3,064	2,924	95.43	174	2.28

Guidance and Care

The Office of Student Affairs has established responsible units, including the Student Counseling Center (including the Students with Disabilities Resource Classroom), Indigenous Students Resource Center, Guidance and Counseling Section, Health Promotion Consultation Center, and Extracurricular Activity Section, to help students with life adaptation and economically or culturally disadvantaged students complete higher education smoothly.

Guidance for students with disabilities

In consideration of the specificity of guidance and intervention for students with disabilities, the Office of Student Affairs has established the Students with Disabilities Resource Classroom to take charge of the guidance for students with disabilities (identified by the identification and guidance board). The Classroom proactively understand the needs in the daily life and learning of students with disabilities upon admission to individualize the supportive services and plans. During AY2019-2021, the Students with Disabilities Resource Classroom has provided academic guidance for a total of 70 students with disabilities through teaching by 108 persons over 1,470 hours. The classroom also arranged individual interviews, assist matching, and aid resource linkage services and planned daily life assistance activities and comprehensive learning workshops to provide guidance for 5,914 times to help students complete higher education smoothly.



▲ Guidance Handbook
Further reading

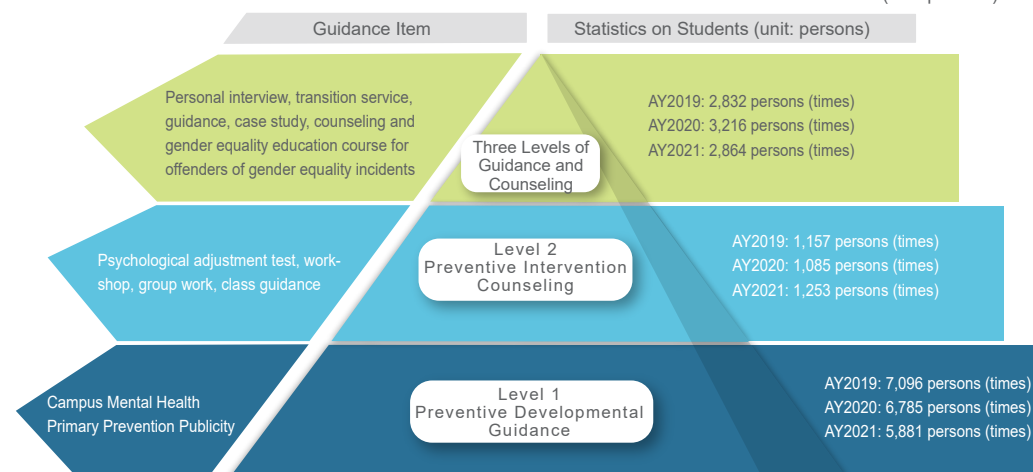
Statistics on Guidance for Students with Disabilities over Past 3 Academic Years (unit: persons)

Service Item/AY	2019	2020	2021
Individual Interview	989	759	973
Assistant Matching	44	1,290	1,245
Aid Resource Linkage	4	4	6
Graduation Transition Guidance Seminars and Career Guidance Activities	78	16	22
Growth Group and Learning Diversity Workshops	190	87	207
Total	1,305	2,156	2,453

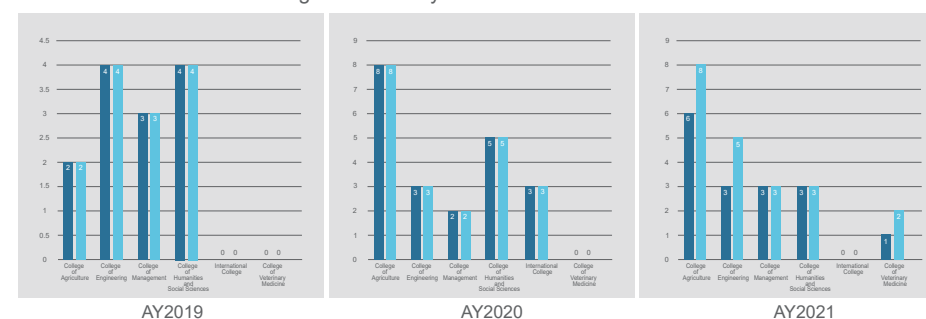
Maintaining physical and mental health through counseling and guidance

The professional guidance team of our Student Counseling Center has five full-time social workers, four full-time psychologist, three part-time psychologists, and one part-time psychiatrist to provide different types of guidance. In August 2021 the center published a new guidance handbook for the guidance reference of student advisors. The handbook is published on the help resource list on and off campus for use by teachers and students when seeking help and consultation.

Statistics on Related Guidance Services and Service Recipients in Past 3 Academic Years
(unit: persons)



Statistics on Counseling Referral by Student Advisors in Past 3 Academic Years



■ Number of advisors referring students to counseling

■ Number of students referred to counseling

■ Guidance for indigenous students

At NPUST, there are 209 indigenous students from 14 ethnic groups. We have established the Indigenous Student Resource Center to provide indigenous students with one-stop guidance service, promote indigenous culture, enhance awareness and identification, and organize discussion activities at the beginning of each semester to provide students with study and daily guide so as to enforce life and study care. Over the past three academic years, over 3,000 indigenous students have sought assistance for academic guidance, daily life guidance, and career guidance from the center, and the number is increasing every year. The suspension of indigenous students was also reduced from 8.09% in AY2019 to 6.36% in AY2021. We have also established an interschool indigenous culture sharing system with schools in the southern region and expand the space for learning and exchange of indigenous students to thrive indigenous cultures and expand the creation of a learning environment for indigenous students.

Statistics on Indigenous Students by Ethnicity in AY 2021

Program/ Ethnicity	Amis	Atayal	Paiwan	Bunun	Puyuma	Rukai	Tsou	Saisiyat	Tao	Thao	Truku	Sakizaya	Sediq	Kanakanavu
Bachelor's Program	41	19	34	10	2	5	2	1	2	1	5	1	3	0
Continuing Education Bachelor's Program	5	1	23	7	0	4	0	0	0	0	1	0	0	0
Master's Program	5	2	10	4	1	2	0	0	0	0	1	0	0	1
In-Service Master's Program	3	0	9	0	0	1	0	0	0	0	0	0	0	0
PhD Program	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Total	54	22	79	21	3	12	2	1	2	1	7	1	3	1

*Data is subject to the October data of the Database of Higher Technological and Vocational Education.

Statistics on Indigenous Students Receiving Guidance in Past 3 Academic Years (unit: persons)

Item/Academic Year	Activity Name	2019	2020	2021
Academic Guidance	English Seminar and Academic Guidance	35	48	67
Daily Life Guidance	Student life care and guidance, birthday celebration, and discussion	426	232	355
Career Guidance	Employment Guidance and Seminar and Hometown Service Learning	5	250	236
	Computer License Course	32	15	21
	Food art and craft art experience activities, traditional gourmet food experience	84	97	24
	Wilderness survival experience camp and tribal culture tour and African drums	195	204	122
	Indigenous culture seminars and dance teaching, southern region indigenous song singing competition, and interschool student club exchange	180	71	304
Total		957	917	1,129



Encouraged students to learn their own language and sing their own songs through the 2021 Southern Region Collegiate Indigenous Song Singing Competition
Further reading



► 2-4 Student Career Development and University-Industry Collaboration 8.6 SV-ED-260a.1~3

We promote off-campus internship to improve student competence, help students to experience the workplace earlier, put theory into practice, develop a correct work attitude, and improve the employment competitiveness of students.

● Comprehensive domestic and overseas internship opportunities

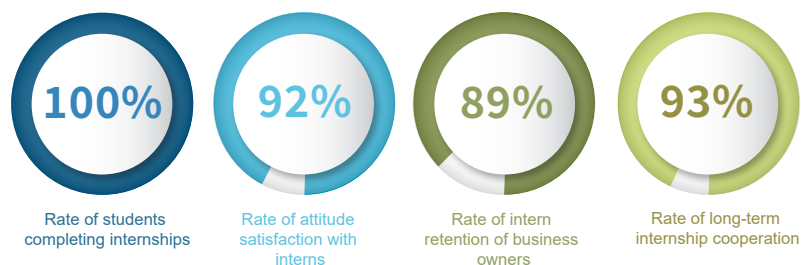
To provide students of different colleges with the opportunities to practice and develop skills, in addition to arranging internship at 29 on-campus internship factories with a total area of 120 hectares, we also promote off-campus internships in collaboration with businesses. During AY2019-2020, we collaborated with 1,788 domestic and overseas businesses to provide internship opportunities for 4,913 students. The internship completion rate of students before graduation is 100%

Statistics on Domestic and Overseas Internships in Past 3 Academic Years

Academic Year	Number of Partner Businesses	Number of Interns
2019	710	1,874
2020	583	1,672
2021	495	1,385
Total	1,788	4,931

To broaden the international vision and enrich the practical experience of students; promote cultural, academic, and industrial exchange; fund all NPUST departments and institutes to select outstanding students to pursue dual-degree study or professional internship or participate in international competition, we have also established the overseas study funding section for students to apply for funding and consultation.

Efficacy of Student Learning Diversification in Past 3 Years



During AY2019-2021, we funded a total of 125 students for overseas internships to develop talents with an international perspective. Due to COVID-19, only one student was approved for the professional technological study at Texas A&M University in AY 2020.

Statistics on Students Approved for Overseas Internships in Past 3 Academic Years (units: persons, NT\$10 thousands)

Academic Year	Country of Internship	Number of Students for Internship	Amount of Funding
2019	Vietnam, China, Japan, Canada, Denmark, Vietnam, Germany, Thailand, Malaysia, the USA, Cambodia, the UK, Indonesia, Brazil, Poland, Australia, Singapore, Czech Republic, Mauritius, Palau, Saint Vincent and the Grenadines, Eswatini, Republic of Fiji	90 Female 48/ Male 42	1,760
2020	USA	Male 1	90
2021	USA, Germany, Japan, Canada, Thailand, Saint Lucia, Nauru, Kingdom of Eswatini	34 Male 13/ Female 21	319

Improvement Plans for Students of Overseas Internships with Unaccomplished Annual Targets (over AY2019)

Item/Academic Year	2020	2021
Overseas internship	89 persons less	56 persons less
Improvement Plan	Actively strive for government funding, business donations, and university endowment fund contribution to fund students in overseas internships so as to expand their international vision and enrich their practical experience.	

▼ Students of the Department of Tropical Agriculture and International Cooperation engaged in internship in the Kingdom of Eswatini with funding from the Collegiate Youth Overseas Internship Program of the overseas technical mission of the International Cooperation and Development Fund. (Source: Taiwan ICDF Facebook)



Career Fair

To enhance employment matching and workplace connection for students, we hold the campus career fair in every graduation season. Due to COVID-19, the fair was held online in 2020. We also set up the “Employment Service Platform” on the Office of Career Development website to provide a job-seeking channel exclusive for NPUSK students. We re-opened the physical career fair in 2021 to help graduates capture the industry trends and latest workplace movements so as to make preparation for employment and smoothly connect with the workplace. Active students could understand the industry trends in advance through the event so as to enrich their skills and knowledge before graduation.

Talents Recruitment Events in Past 3 Years

Year/Item	Activity Name	Employer	Job Openings	Number of Participants	Matching Success Rate
2020	1111 NPUST Online Recruitment Platform--Online Career Fair	80	-	Online	-
2021	“New Year with Employment, Fortune from Jobs” Campus Career Fair	110	11,875 (including 8,943 job openings from the Armed Forces)	1,448	66%
2022	“Employment for the Year of the Tiger, A Bright Future with Jobs” Online Campus Career Fair	140	22,641 (including 8,000 job openings from TSMC and 10,541 job openings from the Armed Forces)	1,302	54%



▼ 2021 Campus Career Fair [Further reading](#)



▲ 2021 MOE College and University Career Guidance Achievement Evaluation Silver Award for Outstanding Guidance Personnel (Administrative). [List of Winners](#)

Career Guidance Performance

To enhance the employability of students, we actively offer professional certificate/license training courses, reward students to participate in international or national competitions, and take on-campus and off-campus internships, creating an employment rate after graduation of over 94%. The achievements are as follows:

Statistics on Performance in Student Employability Development in Past 3 Academic Years

Item/AY	2019	2020	2021
Number of students (times) obtaining certificates/licenses	1,836	2,230	2,025
Rate of students (times) obtaining certificates/licenses	16.9%	20.61%	18.95%
Number of students (times) winning awards in international or national competitions	525	1031	786
Rate of students (times) winning awards in international or national competitions	4.8%	9.5%	7.4%
Rate of graduating students taking off- and on-campus internships before graduation	100%	100%	100%
Graduation rate of students of four-year technical programs of the day school	70.35%	72.10%	71.88%
Rate of students graduating in the current year of four-year technical programs of the day school	87.02%	86.32%	86.33%
Employment rate of graduates	94.6%	96.2%	96.7%

● Performance in University-Industry Collaboration

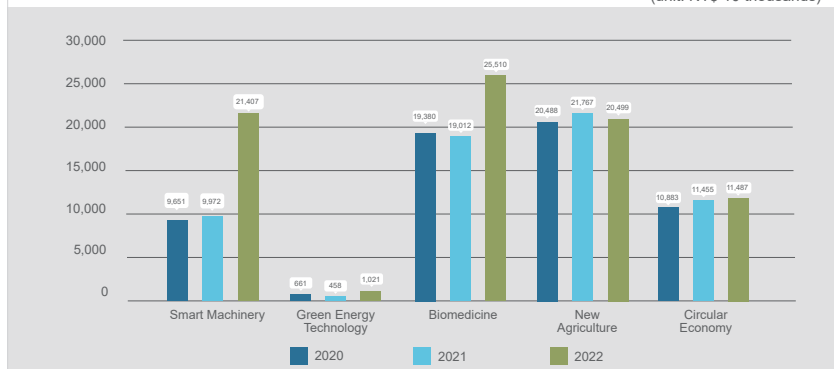
In response to the government's "5+2 Innovative Industries Plan", covering "green energy technology", "smart machinery", "biomedicine (bio-agriculture)", "new agriculture", and "circular-economy", proposed in recent years, we address them in terms of four development themes: "agro-technology", "eco-technology", "platinum society", and "sustainable economy".

Additionally, we actively promote the achievements in feature development to industry talents development, urge interdisciplinary research teams under the MOE Higher Education SPROUT Project to offer micro programs, integrate research outcomes into courses, and encourage new academic staff and research staff to engage in cross-disciplinary collaboration. In response to "Taiwan 2030 Health for All Ages Vision" lately planned by the Executive Yuan, MOE sets developing talents for the following six areas: precision medicine, AI/ML medical devices, health and well-being, food innovation, prevision agriculture, and diversified health as the focus of the Training Program for Interdisciplinary Talents for Precision Health. Many academic staff from different colleges have applied for the projects under the program, and NPUST has become the partner school for projects in "precision agriculture" and "food innovation".

— Performance of implementation of industry policies and projects

In response to the "5+2 Innovative Industries Plan", we have implemented the following university-industry or university-government collaboration projects over the past three years: "smart machinery", "green energy technology", "biomedicine", "new agriculture", and "circular economy", with a total amount of over NT\$2 billion. We have also linked many university-industry collaboration projects to talents development to develop talents for innovative industries at the same time. Additionally, the total amount from technology transfer was over NT\$37 million, including the technology transfer of the research outcomes in the past three years and related to the "5+2 Innovative Industries Plan".

Performance in Implementation of Projects Relating to "5+2 Innovative Industries Plan" in Past 3 Years
(unit: NT\$ 10 thousands)



Performance in Technology Transfer in Past 3 Years (unit: NT\$10 thousands)

Year/Amount	2020	2021	2022	Total
Technology Transfer	982	1,637	1,152	3,771

Performance in Interdisciplinary University-Industry Collaboration of Academic Staff in Past 3 Years

Aspect	Description	Quantitative Performance	Efficacy
Interdisciplinary Research Team	Strengthen the interdisciplinary research and university-industry collaboration capacity of academic staff	Strengthening university-industry collaboration: 9 projects University-industry collaboration: 37 projects Experience inheritance: 6 projects Strengthening interdisciplinary practice of students: 18 projects Participating academic staff: 8,190 persons (times)	Amount created through university-industry collaboration: NT\$1.99 billion
Collaborative development of interschool research teams	Expand R & D capacity through complementation with the expertise of other schools or businesses (e.g., Kaohsiung Medical University, Chang Gung Memorial Hospital)	Partner schools: 63 Partner businesses: 73 Team formation: 73 teams Participating academic staff: 106 persons (times) NPUST students: 271 persons (times) Non-NPUST students: 122 persons (times)	Derivative amount of university-industry collaboration: NT\$24.75 million
Engagement in interdisciplinary industrial R&D of new academic staff	A cross-industry, cross-disciplinary industrial strategic alliance platform has been established to help new academic staff to form R&D teams to extend research capacity to nearby schools and businesses	Partner schools: 48 Partner businesses: 55 Teachers' teams: 55 Participating academic staff: 172 persons (times) Number of new academic staff: 78 persons NPUST students: 190 persons (times)	Derivative amount of university-industry collaboration fund: NT\$21.94 million
Commodification of patents or technologies	Encourage academic staff to commodify research outcomes and patents	Number of technology transfer or licensing cases: 95 Patents: 66	Technology transfer royalty: NT\$37 million Commodified outcomes: 12

● Examples of Success in University-Industry Collaborative Projects of Teachers and Students

Link to SDGs

2.3 2.4



Professor Yung-Chuan Chen of the Department of Vehicle Engineering formed an interdisciplinary R&D team with 10 academic staff for university-industry collaboration with 11 partner businesses to guide 24 students to join the project to promote independent manufacture to the track industry and develop intelligent railroad cars and electric agricultural vehicles. The team has completed the R&D of five smart vehicles and derived 17 university-industry collaboration projects with a total amount of NT\$7.58 million, the application for three Taiwan invention patents and three foreign invention patents, and technology transfer royalties of NT\$1.5 million. Professor Chen also earned the Outstanding Advisor Award at the 1st Taiwan E-Intelligent Vehicle & Green Energy Technology Conference. (2021/07/23) [Further reading](#)

Link to SDGs

2.4 2.5 12.8



Professor Ching-Hsiang Hsieh, Assistant Professor Tzu-Che Lin let students to conduct the interspecific hybridization and selection of quinoa (*Chenopodium quinoa*) and Formosan Chenopodium (*Chenopodium formosanum*). After six years of efforts, they successfully developed the new hybrid of Formosan Chenopodium codenamed "NPUST No. 1". It is a new breed with not-easy to fall large millets and high yield to contribute to food shortages and promote food security. (2022/06/22) [Further reading](#)

Link to SDGs

7.2



The team of Professor Chang-Hsien Tai of the Department of Vehicle Engineering developed the "Compound Generation System Using Compressed Air Energy Storage" to replace battery with air for energy storage to significantly reduce the cost of energy consumption and extend the life of use. This invention can also convert wind power, solar energy, and biomass energy into compressed air for storage, bringing an important breakthrough to renewables application. (2021/10/5) [Further reading](#)

Link to SDGs

1.4 2.3 2.4 2.a 8.2 8.5 10.2 10.6 12.5



Professors Wen-Ling Shih and Chi-I Chang of the Department of Biotechnology and the USR team of Professor Mei-hui Chen of the Department of Forestry co-developed biotech products including probiotics, health-nourishing tea bags, and anti-aging facial cream through the under-forest cultured marbled jewel orchid (*Anoectochilus formosanus*). In the witness of the Forestry Bureau, they signed MOCs with many communities to continuously provide professional technology and assistance for talents development. (2022/7/18) [Further reading](#)

Link to SDGs

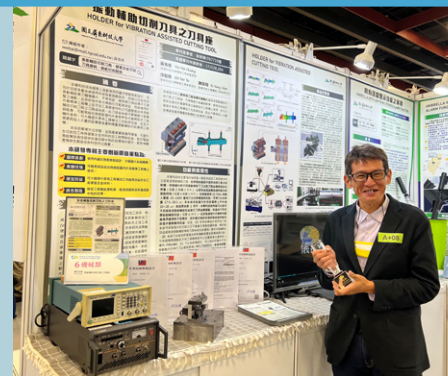
8.3 12.5



Professor Earl-Juei Wang of the Department of Industrial Management supervised students to develop the innovative cold-chain process and green energy high-valued eco-friendly "No smell Aquatic Product Processing Method and Device Capable of Directly Cooking Without Washing and Thawing". This method and device won the gold medal in the invention competition of the 2021 Taiwan Innotech Expo. Professor Wang also won the FutureTech Award with the "Deep Processing for Frozen Aquatic Meal Products High-Valued Utilization for Byproducts" (2021/11/30) [Further reading](#)

Link to SDGs

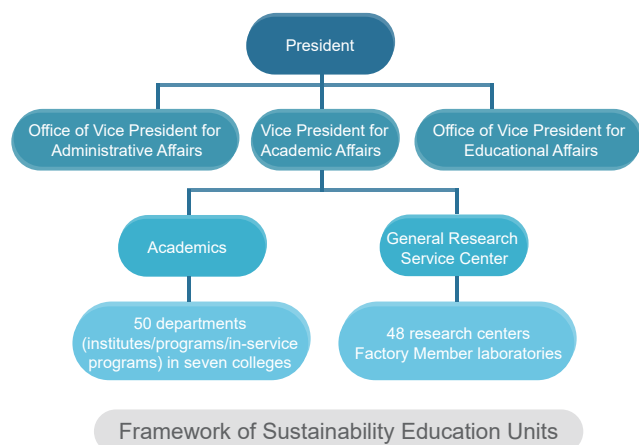
8.3



At the 2022 Taiwan Innotech Expo, Associate Professor Huang Wei-Tai of the Department of Mechanical Engineering won the Platinum Award, the highest honor of the Asia International Innovation Invention Exhibition, among 500 entrants with his "Holder for Vibration-Assisted Cutting Tool". Apart from enhancing work efficiency, this invention also reduce energy consumption and carbon emissions to facilitate industries to implement green manufacturing. (2022/10/15) [Further reading](#)

► 2-5 Sustainability education 4.7 12.a

In addition to 50 departments (institutes/programs/in-service programs) in seven colleges, we also have 48 research centers and various laboratories established based on the areas of specialization of academic staff to engage in sustainability teaching, R&D, and promotion in coordination with the school's sustainable development plan.

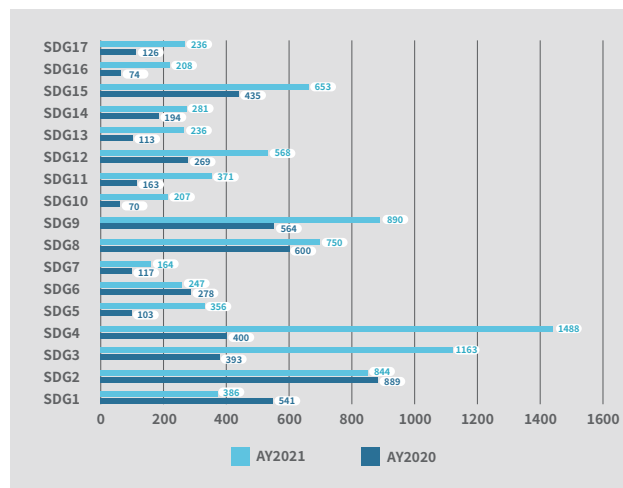


● Sustainability Teaching

In sustainability “education”, academic staff offer sustainability-related professional courses. Apart from budding sustainability education in the four-year undergraduate programs, we also offer the “Sustainable Science Lecture”, “Local Placemaking and Sustainable Development Interdisciplinary Credit Program”, “Sustainability

Concept Development-Innovative and Creative Ideas Course”, and “Sustainable Development Lecture” at the College of Professionals for more students to take sustainability-related courses across disciplines.

In AY 2020 we began encouraging academic staff to fill in coherence between courses and SDGs over the e-learning platform. Apart from linking courses to SDGs, we also maintain high coherence with SDGs 2, 3, 8, and 9.



▲ AY202-2021 Statistics on Course-SDG Coherence

— Case 1

Professor Wen-Tien Tsai of the Graduate Institute of Bioresources (GIB) enthusiastically engages in the development of energy and environmental protection talents and devotes himself to biomass energy R&D to practice the green chemistry belief, making him a promoter of environmental and energy education

enhancement. In 2021 he was awarded the Green Chemistry Joint Awards for the green chemistry education.



▲ Source: Green Chemistry Joint Awards, Chemicals Administration, Ministry of Environment, Executive Yuan

— Case 2

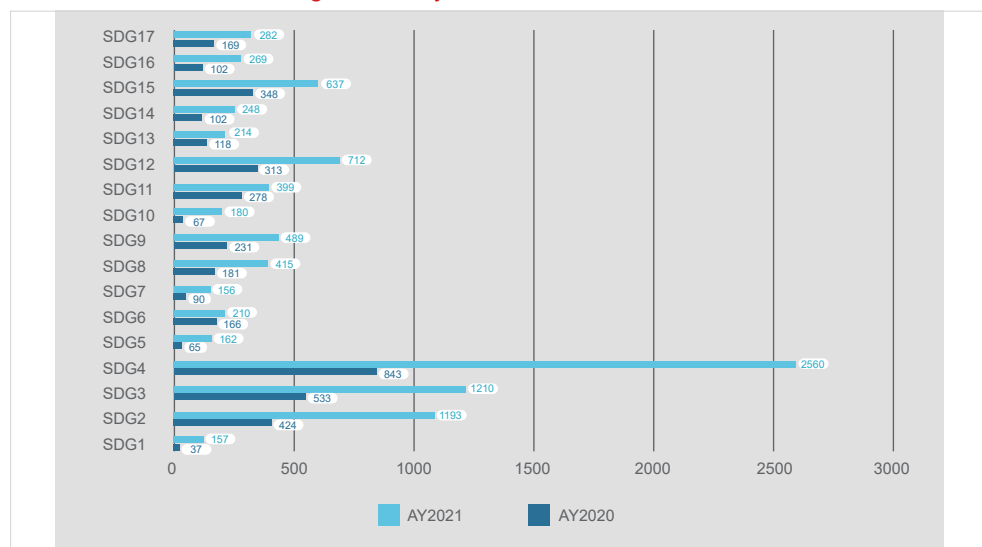
Associate Professor Herlin Chien of the Center for General Education and Deputy CEO of the NPUST Sustainable Development Office and GIB Professor Wen-Tien Tsai integrated SDGs into the course core. They won the champion and a honorable mention with the teaching outcomes at the “2022 Excellence in Teaching Sustainability” co-organized by TAISE and CTCI Education Foundation. [TSISE List of Winners](#)



▲ No. 1 at the 022 Excellence in Teaching Sustainability

Sustainability R&D

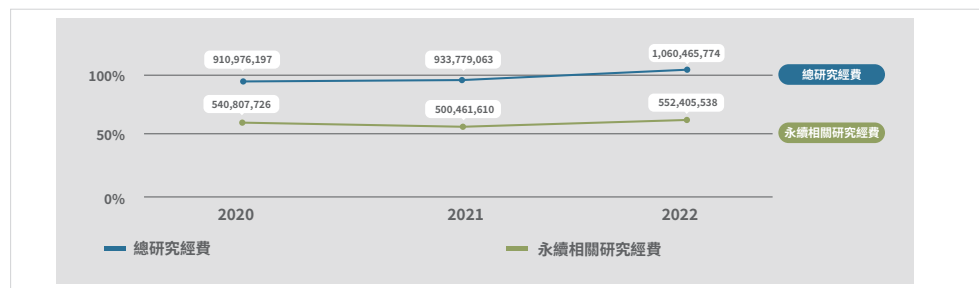
Our research centers and laboratories engage in the research of agrotechnology, daily life applications, humanities and society, commerce, and information management and engineering and focus on the R&D of agriculture, environmental protection, economic development, and social development in coherence with the 17 SDGs. In AY2020 we began encouraging academic staff to fill in the coherence between R&D outcomes and SDGs on the R&D performance platform, and higher coherence with SDGs 2, 3, and 4 is noted. During 2020-2022, the funding for research relating to sustainable development was about NT\$1.6 billion, accounting for nearly 50% of the total amount of R&D funds.



*Data included journals, conferences, monographs, technical reports, awards, professional academic activities, and off-campus professional sources.

*Each R&D performance item may cover many SDGs.

▲ AY 2020-2021 R&D Performance of Academic Staff and Coherence with SDGs



▲ Sustainability-Related R&D Funds in Past 3 Years

Case 1

In view of needs of industries, we established the “Sustainable Circular Economy R&D Center” in 2022 with the advanced green technology, agriculture circular economy value creation, biomass energy circulation, and animal husbandry environmental sustainability technology teams to develop innovative technologies and integrate into green energy application across disciplines for waste materials from agriculture, forestry, fisheries, and animal husbandry; waste recycling and reuse; energy conservation; and carbon reduction to fuel up the “circular economy” and “sustainable environment” and contribute to mitigating the impact of climate change and energy sustainable development.



▲ Energy monitoring system of the Green Energy Light House



▲ The Agriculture Circular Economy Value Creation Laboratory turns forestry byproducts into fuels.

Case 2

The team of Professor Pi-Jen Tsai of the Department of Food Science and the academic staff team of the Department of Vehicle Engineering co-developed the High Voltage Electrostatic Field (HVEF) Fruit and Vegetable Preservation System. Preventing profligacy is increasing income: The HVEF preservation technology can reduce fruit and vegetable loss by 10% to save over NT\$2 billion (induced by the Taiwan food loss and waste based on the “Cabbage Index” by *CommonWealth Magazine* (519)). Won the 2022 National Innovation Award. Awarded the 2022 NSTC Germination Program Phase II.



▲ HVEF Fruit and Vegetable Preservation System

傳統冷藏包裝法	本技術
3-5天	42天
3-5天	40天

▲ Food Loss Comparison Chart

● Sustainability Promotion

To practice the SDGs and continuously promote and deepen the sustainability consciousness of stakeholders, we actively implement various activities for promoting sustainability education.

– Building Websites

To promote sustainable campus development in collaboration with other schools, we set up bilingual websites for the [Sustainable Development Office](#) and the [Green NPUST](#). In addition to communicating to stakeholders, we also proactively disclose experience relating to the promotion of sustainable campus, with contents covering energy use strategy, waste disposal, water use, transportation planning, and sustainable environmental education.

– Forming Social Media

Through the [Sustainable Development Office Facebook](#) fan page, we upload various sustainable development activities and information of NPUST, exchange opinions and share experience with fans, shape the new-styled public governance thinking and innovation economics, and change the social and sustainable culture.

– Releasing the NPUST SDO e-Newsletter

SDO began releasing the [SDO e-Newsletter](#) each month in March 2021 by reporting new insights into the four NPUST sustainable development themes: “agro-technology”, “eco-technology”, “platinum society”, and “sustainable economy” to actively match domestic and overseas technology information for sustainable development and industry needs. By 2022 there were 580 subscribers.

– Promoting sustainable library resources

The NPUST Library and Exhibition Hall organized the “[SDGs e-Book Zone](#)” special exhibition to exhibit 1,889 e-books relating to the 17 SDGs for readers to explore and understand more about sustainability issues. To enhance the subscription rate, we recommend books on the SDO e-Newsletter and over the SDO Facebook fan page, and there were up to 65,657 clicks over the past three years.

– Promoting activities

1. As the director school of the Green University Union of Taiwan (GUUT), we organized the 8th International Workshop on UI GreenMetric (IWGM) in 2022 to link global colleges and universities and share and investigate the sustainable development of green universities for the sustainable development of worldwide green universities.

2. NPUST President and CEO and Deputy CEO of SDO were invited to give speeches in various units and schools and to radio and magazine interviews to share our experience and achievements in green university and campus sustainable development, hoping to realize the environmental, economic, and social SDGs together.

Date	Activity Name	Speech Topic
5/6/2021	Rethinking High Education Towards Sustainable Development	Building Green Universities and Sustainable Development
6/22/2022	University Social Influence Lifting Conference	Experience Sharing for University Sustainability Report Preparation
9/6/2022	Interview by the National Education Radio	Experience Sharing for Participation in UI GreenMetric World University Rankings
9/27/2022	8th International Workshop on UI GreenMetric (IWGM)	Investigation of Sustainable Development for Green Universities

3. Co-organizing various activities for promoting and ingraining education for sustainable development with external units



▲ President Chin-Lung Chang shared the experience in practicing green university at TAISE.
[Related Report: Taiwan Institute for Sustainable Energy](#)



▲ We co-organized the “TWSGI x Seeds of Hope and Action” exhibition with Taiwan Soka Association to attract more stakeholders to care about the hope and future of sustainable development.
[Further reading](#)



▲ We implemented the “Longjing River Revitalization Project” in collaboration with the Blue Donggang Creek Conservation Association of Taiwan through the “Intergovernmental Organization” general education course, hoping to enhance the waste-to-resource execution rate of animal excrements of livestock farms along the Longjing River to help solve the severe contamination of the Donggang River by the Longjing River. [Further reading](#)



▲ In the general education course, we co-organized the “2022 Youth Sustainability Ingraining Program-SDGs Empowerment Workshop” with President Chain Store Corporation and Unity Sustainability Services for students to understand sustainability trends and SDG contents and fulfill Earth sustainability from the daily life. [Further reading](#)

► 2-6 COVID-19 Counteractions 3.3 G103 | Material Issue G13

COVID-19 broke out in Taiwan in 2020. In response to the changing condition of the pandemic over the past three years, we have established various campus countermeasures to provide teachers and students with a safe and worry-free environment for teaching and learning.

The implementation of epidemic controls requires the combined efforts of all NPUST members. The epidemic control team held meetings with all units to establish epidemic control measures and coordinate and integrate all school resources to implement these epidemic control measures. Additionally, to enhance the horizontal connection of all campus units, we have also established the department-based LINE groups to unfailingly communicate all established epidemic control measures to each department/institute. The focus epidemic control measures during the pandemic are as follows:

Development of Campus Epidemic Control App

Developed the "NPUST Epidemic Control App" for mobile to record the "health condition" and campus trace of personnel.

Campus Event Epidemic Control Mechanism

Developed the "Non-NPUST Personnel Contact Tracing System" to capture the health condition of event participants.

Countermeasures for Negative Impacts of COVID-19 in Past 3 Years

Established the care and isolation sectors.

1. Care sector: 25 rooms for accommodating 50 persons.
2. Isolation sector: 35 rooms for accommodating 126 persons.

Reporting and handling mechanisms for confirmed cases

1. Established the "COVID-19 Confirmed Cases and Contacts Reporting System"
2. Confirmed cases: 667 persons
3. Home isolation: 428 persons

Environmental cleaning and epidemic control materials preparation

1. Activated various epidemic control education and training activities and environmental cleaning.
2. Enhanced cleaning and disinfection of all classrooms and restrooms.
3. Epidemic control materials: Stock for 3 months

Home quarantine management for international students

1. Trace and control health condition for all 8 student halls and 4 guesthouses.
2. Isolation sector with one room for each person.
3. Students: 172, teachers: 5

Student Hall Management

1. Full-scale body temperature measurement for all 8 student halls and 4 guesthouses.
2. Formed the student hall care teams.
3. Established the isolation quarantine room

Study-at-ease measures

1. Students received no record of absence and examination ban and their marks were not deducted for absence from school due to epidemic control.
2. Students on suspension may extend the term of suspension for confirmed COVID-19.
3. Coordinative and supportive measures were designed for off-campus internships to help students complete study as planned.
4. School lockdown without class shutdown
- Distance learning: 2,087 courses

Guidance and care for students with disabilities

1. Set up the epidemic control site to outreach correct epidemic control measures.
2. Promoted the student advisor care and guidance mechanisms
3. Guidance provision: 161 times (persons)
4. Video interview: 74 times (persons)
5. Telephone care: 190 times (persons)
6. SMS/email care: 74 times (persons)
7. Group guidance: 9 times (persons)

Statistics on Applications for Distance Learning Courses in Past 3 Semesters (unit: courses)

Category	AY2020S2		AY2021S1		AY2021S2	
	Number of Courses	Percentage in all courses	Number of Courses	Percentage in all courses	Number of Courses	Percentage in all courses
Total number of courses	2,726	-	2,895	-	2,778	
Synchronous distance learning	2,726	100%	69	2.38%	50	1.80%
Synchronous and asynchronous distance learning at the same time	-	-	63	2.18%	9	0.32%
Asynchronous distance learning	-	-	14	0.48%	8	0.29%
Total	2,726	100%	146	5.04%	67	2.41%

*Statistics of AY2021S2 were produced before the implementation of full-scale distance learning on 9 May 2022 on courses by application.



▲ Epidemic Control Site



▲ Distance Learning Site

▲ The NPUST huts and guesthouses became the isolation and quarantine facilities.



▲ During the pandemic, we designed the "alcohol pen" that allowed teacher and students to carry and use it ubiquitously to care for the health of teachers and students.
(Staff Reporter Yen-Ting Chen, *The Liberty Times*)

► 2-7 Performance of Sustainability Governance

Through the concerted efforts of all teachers and students, we were recognized by the UI GreenMetric World University Rankings in all six categories: Energy and Climate Change (CE), Waste (WS), Water (WR), Transportation (TR), Settings and Infrastructure (SI), and Education and Research (ED). During 2014-2022, **we were ranked No. 1 in Taiwan for nine consecutive years**. The Impact Rankings by *Times Higher Education* is based on the 17 SDGs, and we were ranked **among the world's top 201-300** among a total of 1,524 universities from 11 countries in 2022, more than 100 places higher than in 2021. Additionally, we were ranked No. 4 among 45 universities and **No. 1 among USTs** in Taiwan. In seven SDGs, including end poverty (SDG 1); end hunger (SDG 2); industry, innovation, and infrastructure (SDG 9); responsible consumption and production (SDG 12), climate action (SDG 13), life below water (SDG 14), and life on land (SDG 15), we were ranked among the world's top 101-200, suggesting that our excellent performance in talents cultivation, R&D, university-industry collaboration, and social service relating to the "agricultural production", "environment and ecology", "elderly well-being", and "social responsibility" in the 17 SDGs has been recognized. In 2022 we run for the first-time "integrated performance" rating at the USR Awards by *Global View Monthly*. The rating criteria were based on related international ratings to rate the performance in sustainability implementation in terms of four aspects: sustainability governance, green campus, USR plan, and SDGs research. We were ranked **No. 1**, suggesting that our performance in sustainability governance and implementation was recognized at home and abroad. The related awards are tabulated below.

