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### About the Report GRI 2-2 \ 2-3

National Pingtung University of Science and Technology (hereinafter referred to as "the University" or "NPUST") has, since 2020, compiled and published the Sustainability Report on a biennial basis. This is the third publicly released report. Over the years, the University's sustainability reports have all been made available on the "Office of Sustainability" website for external reference. This report is centered on the United Nations Sustainable Development Goals (SDGs) and demonstrates to stakeholders the University's performance in governance (G), environmental sustainability (E), and social inclusion (S). It presents the University's strategies, goals, and vision in the field of sustainable development, and responds to sustainability topics of concern to stakeholders.



《2020 Sustainability Report》 Taiwan Corporate Sustainability Awards (TCSA) Platinum Award



《2022 Sustainability Report》 Taiwan Corporate Sustainability Awards (TCSA) Gold Award

### Reporting Period and Scope

Academic year data scope: Academic Years 2022 to 2023 (August 1, 2022 to July 31, 2024). Annual data scope: 2023 to 2024 (January 1, 2023 to December 31, 2024). To ensure data completeness and comparability, certain information covers periods prior to 2023.

### **Report Structure and Boundaries**

This report follows the GRI Standards: 2021, and has been compiled in accordance with the four principles of inclusivity, materiality, responsiveness, and impact of the AA1000 Accountability Principles (2018). Sustainability information has also been disclosed in accordance with the Sustainability Accounting Standards Board (SASB) SASB-Education standards.

### **Report Compilation and Quality Assurance**

This report was prepared under the leadership of the Director of the Office of Sustainability (concurrently served by the Vice President for Academic Affairs), who convened relevant administrative and academic units to assist with drafting. To ensure precise disclosure of information, the relevant content was reviewed for accuracy and completeness by the heads of the respective units, and then further analyzed and consolidated by the Sustainability Task Force. The Sustainability Advisory Committee subsequently conducted internal review, followed by verification and assurance by an independent third-party impartial institution.

Ope	erational Process	Description
į	Consultation Focus	The Sustainability Task Force developed the report structure and distributed questionnaires, and analyzed topics of concern to stakeholders.
	Report Compilation	The Sustainability Task Force consolidated data provided by the units responsible for each disclosure topic to produce the draft report.
<u>:å:</u>	Internal Review of the Report	Members of the Sustainability Advisory Committee reviewed the draft report, stakeholder concerns, and short-, medium-, and long-term goals mapped to GRI material topics for university de-velopment.
	External Assurance	The report underwent preliminary review and secondary verifica-tion procedures by an independent third-party impartial institution to ensure the accuracy and credibility of its content.
<b>i</b>	Finalization and Publication	The report was approved by the Sustainability Advisory Commit-tee and released upon authorization by the Committee Chair (the President).

### **Report Assurance and Verification**

In May 2025, the report was reviewed by the independent third-party impartial institution "ARES", which verified that the report complies with the GRI Standards and the AA1000 AS v3 Type 1 moderate assurance level. The assurance statement is attached in the appendix of this report.

### **Feedback**

#### **NPUST Sustainable Development Office**

If you have any quidance or suggestions regarding this report, please feel free to contact us.

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### ■ From the President of NPUST

Since its establishment in 1924, National Pingtung University of Science and Technology (NPUST) has reached its centennial. Founded with agriculture as its cornerstone, the University, as the leading higher education institution in Taiwan for technical and vocational education in the agricultural field, has nurtured numerous pragmatic and application-oriented technical professionals, contributed to Taiwan's agricultural development, and laid a solid foundation for industrial upgrading and economic transformation.

"2050 Net Zero Transition" has become a global trend as well as Taiwan's sustainable development goal. The government has formulated key strategies through four major transitions: "energy transition," "industrial transition," "lifestyle transition," and "social transition." In response to the government's promotion of net zero transition and sustainable development, NPUST has put forward four major axes of university development: "technological agriculture," "ecological industry," "platinum society," and "sustainable economy." These are integrated across the seven colleges of Agriculture, Engineering, Management, Veterinary Medicine, Humanities and Social Sciences, International Studies, and Professional Studies, to achieve the three major educational sustainability goals of "professionalization," "internationalization," and "holistic education." The University incorporates the concept of sustainability into practical teaching, innovative research, technological development, social services, and international cooperation, and continuously deepens its efforts in the three dimensions of Governance (G), Environmental (E), and Social (S), to cultivate outstanding technical and vocational talents with sustainability thinking and civic awareness, advancing toward becoming an "international top-tier comprehensive university of agricultural science and technology."

To realize the United Nations Sustainable Development Goals (SDGs) and foster a culture of sustainability on campus, the University established the "Office of Sustainability" in 2020 to promote campus sustainability actions. Sustainability reports were published in 2021 and 2023, receiving the Platinum Award and Gold Award in the university category of the Taiwan Corporate Sustainability Awards (TCSA). In 2021, under the Ministry of Education's University Social Responsibility (USR) Program, the University was invited, together with National Sun Yat-sen University and eight other universities, to jointly sign the "USR Co-Cultivation Joint Agreement," thereby creating co-cultivation benefits of effective participation and positive social impact. In the same year, the University also signed a memorandum of understanding with the Taiwan Institute for Sustainable Energy (TAISE), channeling academic research capacity back into society. In 2022, the University joined hands with National Taiwan University and nine other universities to establish the "Taiwan University Alliance for Sustainable Governance," in order to share higher education resources and accelerate sustainable transformation in higher education. In 2023, under the National Science and Technology Council's "Taiwan Sustainability Hub Program," the University was selected to establish the nation's seventh sustainability hub, the "1.5-Degree Food and Consumption Transition Sustainability Hub," to promote systemic transformation from food to table, and to develop and promote carbon-reducing farming methods, regenerative agricultural production models, and green consumption transformation.

Looking at international rankings, since 2014 the University has participated in the UI GreenMetric World University Rankings and has maintained first place nationwide for 11 consecutive years. Additionally, since 2021, the University has participated in the Times Higher Education (THE) Impact Rankings and has, for four consecutive years, ranked first among Taiwan's universities of science and technology.

Turning to domestic achievements, in 2023 the University's "Smart Agriculture Sustainable Development Project" received the "National Sustainable Development Award in Education" from the Executive Yuan. In 2024, NPUST ranked first among public universities of science and technology in CommonWealth Magazine's "USR University Citizenship Survey." Also in 2024, in Global Views Monthly's "Best University Rankings," the University ranked first in the sustainability-related categories of "Green Energy University" and "Campus Area." Furthermore, from 2020 to 2024, NPUST has, for five consecutive years, received the "USR University Social Responsibility Award," garnering numerous honors including first prizes in the Eco-Friendly Group, Comprehensive Performance in Technical and Vocational Education Group, Green Campus Group, as well as a Model Award in the Well-Being and Co-Living Group.

Upholding the school motto "Care for Humanity and Cherish All Living Things; Seek Truth from Facts," NPUST has long been deeply rooted in its local community, and has earned remarkable social reputation and brand recognition. Beyond talent cultivation, local connection, and global engagement, the University is actively expanding its social impact. By integrating the networked strengths of cross-department, cross-disciplinary, and cross-campus collaboration, and linking with government and industry resources, NPUST promotes the development of local industrial clusters and community cultural innovation, working hand in hand with society to realize sustainable development. At this juncture, through the 2024 Sustainability Report, the University concretizes its vision for sustainable development, serving as a reference for implementing sustainability action plans, recording the University's progress in promoting sustainable development, and disclosing campus governance information through the public release of this report. In doing so, the University provides society with transparency and accountability, contributing to global sustainable development.



5

### SDGs Sustainability Practices

### **Highlights of Global Sustainability Rankings**



**UI GreenMetric World University Rankings** 

Since 2014, the University has ranked No. 1 nationwide in the UI GreenMetric World University Rankings for eleven consecutive years.

2024	
Domestic Ranking	1
Asia Ranking	2
World Ranking	23
Number of Participating Countries/Universities	95 / 1477
Global Ranking Percent-age	1.55%

	World Ranking	Domestic Ranking
Campus Setting and Infrastruc-ture	9	1
Energy and Climate Change	168	4
Waste and Resources Manage-ment	74	5
Water Usage	44	3
Transportation Planning	89	4
Sustainable Environmental Edu-cation	46	2



Times Higher Education Impact Rankings Impact Rankings by Times Higher Education

For four consecutive years, the University has ranked first among universities of science and technology, with steady progress in global rankings. In 2024, the University was ranked among the top 101–200 globally and placed fifth nationwide.



### Top 100 worldwide in 5 indicators







Ranked 36th worldwide Ranked 2nd nationwide

Ranked 37th worldwide Ranked 2nd nationwide

Ranked 39th worldwide Ranked 1st nationwide





Ranked 94th worldwide Ranked 2nd nationwide

Ranked 100th worldwide Ranked 4th nationwide

### **College of Agriculture**



The College is fully committed to developing "Technological Agriculture," "Ecological Industry and Sustainable Agriculture," "Food Safety," and "Agricultural Globalization," promoting talent cultivation, research and development, and international exchange, in order to enhance the quality of human life and environmental sustainability.

- · Department of Plant Industry
- · Department of Food Science
- · Department of Forestry
- · Department of Aquaculture
- · Department of Animal Science
- · Department of Plant Medicine
- · Department of Wood Science and Design
- Department of Biological Science and Technology
- Graduate Institute of Bioresources (PhD Program)
- · Bachelor of Program in Scientific Agriculture

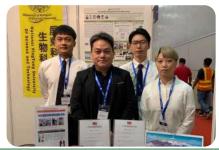
### Sustainability Highlights

2023 ITEX Gold award! **NPUST teams shine** 

**Professor Wu Hsing-Ju Promotes Indigenous Forest Conservation** and Receives Recognition as a "Green Oscar" Laureate

3.4 12.2

11.3 15.5 15.c



The team's project, "Camellia Seed Flavonoid Kaempferol Against Organ Inflammation and Improvement of Brain Cognitive and Memory Function," won the Gold Medal at the 2023 International Invention, Innovation and Technology Exhibition (ITEX) in Malaysia. This invention demonstrates outstanding anti-inflammatory and organ-protective effects, embodying agricultural circularity and sustainable health.



Assistant Professor Wu Hsing-Ju received the 2024 Forestry and Nature Conservation Merit Award. Since 2018, she has assisted the Pingtung Branch in promoting cooperation with indigenous communities, protecting forest resources, improving wildlife habitats, and establishing a hunting culture association to address conflicts between wildlife and humans.

### **Sustainability Practices**

A New Beacon of Taiwanese **A**ariculture

**Department of Forestry Research Enhances Yellow Carbon Sequestration Farming** 

2.4 12.3



In collaboration with TREND WIN BIOTECH-NOLOGY, the University published research results on "The Effects of Plant Growth Regulators on Rice Growth and Yield." By using plant growth regulators, the heading rate of rice was improved, and the number of effective tillers increased by 34%. This technology not only promoted uniform rice heading but also improved rice quality.

"Taiwan Ecotourism and Local Revitalization Alliance" Promotes **Sustainable Ecological Development**  Technology to Enhance Hydroponic **Cultivation Efficiency** 

microorganisms, ap-plied to rice cultivation systems,

sequestration. Re-search outcomes included circular

economy practices and organic fertilizer production,

significantly en-hancing crop growth and carbon

reducing carbon emissions while increasing soil

carbon content, ad-vancing the goal of net zero

12.b 13.3 15.4 17.16



The "Taiwan Ecotourism and Local Revitalization Alliance" was established, bringing together 44 or-ganizations, 65 communities, and 10 advisory teams across Taiwan. It unites industry, government, academia, and communities to jointly promote tourism, conservation, and local prosperity, strengthening community management and international connec-tions, and creating a new paradigm of sustainable ecotourism in Taiwan.

2.4 12.2 13.3 15.3



The Department of Forestry research team

developed high-efficiency carbon-fixing

carbon emissions by 2050.

Plant Nutritionists Develop Ion-Sensing

In collaboration with National Taiwan University and Tamkang University, the University formed a team of plant nutritionists and developed a "Digital Service Platform for Crop Ion Sensing." providing real-time multi-ion concentration data to improve hydroponic crop growth and quality. The technology was applied in the University's green energy greenhouse to advance smart agriculture development.

### **College of Engineering**



The College has introduced technologies from industrial research, planned teaching content in response to industrial talent demands, and strengthened practical courses in industryacademia cooperation. This enhances students' employment competitiveness and advances six major research and development focuses: artificial intelligence, carbon neutrality and AI, green energy, disaster prevention, smart agriculture, and advanced bioengineering, cultivating professional talents required by industry.

- · Department of Environmental Science and Engineering
- Department of Civil Engineering
- · Department of Mechanical Engineering
- · Department of Soil and Water Conservation
- Department of Vehicle Engineering
- · Department of Biomechanical Engineering
- Department of Materials Engineering

### Sustainability Highlights

**Department of Soil and Water Conservation Team Wins "Outstanding** Team" at Presidential Hackathon

頭發總統盃黑客松國內松獎座&合影

千分之四的美麗

**Agricultural Machinery Intelligent** Automation Industry-Government-Academia-Research Exchange















Professor Tang Chi of the Department of Soil and Water Conservation, together with an industrygovernment-academia team, formed "The Beauty of Four per Thousand," which won the "Outstanding Team" award at the 2023 Presidential Hackathon. Through cross-disciplinary collaboration and the effective treatment of agricultural waste, the team achieved the goal of increasing topsoil carbon content by four per thousand, promoting the advancement of the net zero carbon emission policy.



In line with the government's net zero carbon emis-sion policy, the University has actively developed electric agricultural machinery. In collaboration with industry, government, academia, and research, it organized an exhibition showcasing multiple electric agricultural machinery devices, emphasizing the development and application of electric agricultural machinery, and promoting the advancement of elec-trified agricultural machinery.

### Sustainability Practices

**Department of Biomechanical Engineering Develops** "Optical Agricultural Labor-Saving System"

Green University

Sustainability (E)

and Environmental

**Enhancing Safety of Electric Mobility Ve**hicles in Indigenous Townships

3.6 11.2

Professor Chang Ming-Yen of the Department of

Vehicle Engineering designed a new type of electric

mobility vehicle suitable for mountainous areas to

enhance the mobility safety of elderly residents in

indigenous villages. By combining simulation and

field testing, vehicle performance was optimized,

thereby realizing sustainable transportation and care



for disadvantaged groups.

Facing global labor shortages in agriculture, the University team developed a "Hydroponic Strawberry Labor-Saving Harvesting Robot" and a "Low-Power Dual-Wavelength Laser Sparrow Repelling System," which improve field operation efficiency and productivity, and won multiple competition awards.

**Department of Mechanical Engineering Promotes Robotics Education and Establishes "Kaohsiung and Pintung** Region Robotics Alliance" with **Schools in Kaohsiung and Pingtung** 

**Environmental Disaster Prevention Education Exhibition** 

4.4 8.2 9.4





In recent years, the Department of Mechanical Engineering has promoted teaching with industrial robotic arms, guiding hundreds of teachers and students to pass the Robotics Engineer Certification, and established the "Kaohsiung and Pintung Region Robotics Alliance" in cooperation with several senior high and vocational schools, advancing technical and vocational education and industrial automation.



The Department of Soil and Water Conservation team downsized the originally campus-based "Soil and Water Conservation Outdoor Classroom" and brought it on site, setting up interactive games to enhance understanding of soil and water conservation knowledge. This allowed the public, teachers, and students to understand the importance of environmental education and disaster prevention education, and to participate in concrete actions.

Green University and Environmental Sustainability (E)

and Fulfillment of 5. Responsibility (S)

### **College of Management**



The College is dedicated to cultivating enterprise management talents with diverse orientations, covering agricultural enterprise and biotechnology enterprise management, small and medium-sized enterprise management with competitiveness as the core, hospitality and leisure business management with a service-oriented focus, and management talents with an international perspective. The College also actively promotes AACSB international accreditation to enhance education quality and cultivate economic management talents with global competitiveness.

- · Department of Agribusiness Management
- Department of Management Information
- · Department of Industrial Management
- Department of Business Administration
- · Department of Fashion Design and Management

- · Department of Hotel and Restaurant Management
- Institute of Landscape Architecture and Recreation Management
- International Degree Program in Finance
- Executive Master of Business Administration (EMBA)

### Sustainability Highlights

**NPUST's First National Representative** in International Skills Competition for **Patisserie and Confectionery** 

**Outstanding Performance of NPUST in** the "Rural Up!" Competition for University Students Organized by the Ministry of Agriculture

4.4 8.6













Chen Yi-Jen, a student from the Department of Hotel and Restaurant Management, became the University's first national representative in the international skills competition for patisserie and confectionery through in-school training. She has won multiple international medals and will compete in Lyon. France, striving for global honor, showcasing her remarkable ability, and bringing pride to the nation.



Students from the Department of Agribusiness Management, the Department of Wood Science and Design, and international students collaborated across disciplines to engage deeply in communities, promoting marine sustainability, cultural revitalization, and agricultural innovation. Their efforts demonstrated the social responsibility and practical achievements of an agricultural university, earning multiple competition awards.

### **Sustainability Practices**

Opening of NPUST Healing Garden

**USR Carbon Inventory Generalization Seed Action** 

3.4 4.7 10.2 11.7





Faculty and students of the Institute of Landscape Architecture and Recreation Management combined the benefits of nature and horticultural therapy to create a healing garden, enhancing physical and mental health. An international forum was held to promote professional exchange, demonstrating the University's outstanding contributions to sustainability practices and the field of horticultural therapy.

A seed team for carbon inventory was established, assisting 38 enterprises in adopting carbon inventory within two years, cultivating carbon management talents, and extending into high school curricula to promote the generalization of carbon inventory and the implementation of sustainability education.

**Promoting Education in Rural Areas and Digital Equity** 

**EMBA Charity Sale Supporting the Underprivileged and Students** 

4.1 4.5 10.2





Professor Tsai Cheng-Fa of the Department of Management Information Systems led a team deeply engaged in rural areas, applying Arduino and block-based programming to introduce AI and IoT courses, thereby enhancing the digital literacy and competitiveness of disadvantaged students, realizing digital equity and sustainable education.



During the school anniversary, EMBA alumni organized a charity sale with enthusiastic participation from past cohorts. All proceeds were donated to disadvantaged groups and students, demonstrating corporate social responsibility, strengthening alumni bonds, and jointly giving back to society.

### **College of Humanities and Social Sciences**



The College upholds the spirit of pragmatism, stability, and innovation, with teaching as its foundation and research as its support, cultivating outstanding talents in the humanities and social fields who possess both professional competence and intelligence, as its unshirkable mission.

- · Department of Social Work
- · Department of Modern Languages
- · Department of Recreational Sports and Health Promotion
- · Department of Child Care

- · Center for Teacher Education Program
- · Center for General Education
- · Institute of Technical and Vocational Education
- · Graduate Institute of Hakka Cultural Industry

### **Sustainability Highlights**

**Department of Social Work Team Wins** the 2024 Global Views USR Well-Being and Co-Living Model Award

**Three Faculty Members Receive Hakka Professional Medal and Ministry of Education Social Contribution** Award

3.4 10.2

17.16

4.7





Through "Elderly-Friendly Mutual Support and Local Care for the Elderly", the team addressed the issue of population aging in Pingtung County. promoting elderly-friendly mutual support and focusing on long-term care in indigenous communities.



At the 2023 Hakka Contribution Award Ceremony, three faculty members of the University were commended for their contributions to Hakka culture and social education, advancing social education and cultural preservation.

### **Sustainability Practices**

Jointly Organized with the Pingtung **County Public Health Bureau:** "Horticultural Green Therapy -Intergenerational Integration and Youth-Senior Co-Learning"

**Rooting International Partnerships Forum** with High Schools and Vocational Schools

3.4 10.2 11.7





The program cultivates healthcare talents, strengthens interdisciplinary knowledge, promotes employment and salary improvement, and refines healthcare curricula and industryresearch collaboration, thereby enhancing industrial development and well-being.



Together with nine key senior high schools and vocational schools, the University organized a forum to promote international education and nurture professional talents with multicultural awareness and global perspectives.

**USR** Intergenerational Harmony – Little Sun Inclusive Day

Schweitzer Spirit Education Service – Life × Nature Camp: When Life Meets Nature

3.4 4.2 10.3





The activity aimed to promote interaction among the elderly, children with disabilities, and general chil-dren, creating an inclusive and friendly colearning environment.

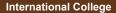


The "Life × Nature Camp: When Life Meets Nature" summer camp fostered diverse learning and community engagement among rural students, creating rich educational experiences.

Vision and Strategies of 1. a Sustainable University

### Green University and Environmental Sustainability (E)

### 5. Responsibility (S)





Based on a high-quality all-English teaching environment. and focusing on the concept of "Three Crosses" (crossgenerational, cross-national, and cross-disciplinary professional development), the University promotes sustainable agricultural technology innovation and sustainable development in tropical environments, deepens international industry-academia cooperation, and advances the application and development of emerging technologies in tropical regions, cultivating cross-disciplinary technological talents with professional competence, global vision, and international mobility.

Department of Tropical Agriculture and International Cooperation

**FUTURE TECH AWARD** 

- International Program in Ornamental Fish Technology and Aquatic Animal Health
- International Degree Program in Animal Vaccine Technology

### Sustainability Highlights

**International Degree Program in Animal** Vaccine Technology Wins the 2024 **Future Tech Award** 

**Innovative Testing Safeguards Food** Safety **Toward a Healthy and Sustainable Future** 

3.3 9.5





The research team of the International Degree Program in Animal Vaccine Technology won the 2024 Future Tech Award with the project "Development of a New-Generation Vaccine for Porcine Coronavirus," showcasing sustainable innovation capacity in the development of animal vaccines.

Foodborne diseases threaten global health. By developing rapid diagnostic reagents, the efficiency of on-site testing for foodborne pathogens is improved, reducing food contamination and health risks, promoting sustainability in the food industry, and safequarding public health.

### **Sustainability Practices**

Ambassador of Saint Lucia to Taiwan, Robert Kennedy Lewis, Visits NPUST and Meets with Students

The Most Distinctive International College **Graduation Ceremony** 

2.a 4.3 17.9

4.b 10.2 17.16



Robert Kennedy Lewis. Ambassador of Saint Lucia to Taiwan, visited the University and met with seven students from the Department of Tropical Agriculture and International Cooperation. The University focuses on technological agriculture and environmental sustainability, and its graduates have made significant contributions to their home countries. This visit strengthened academic cooperation between the two sides and promoted further cross-national exchanges.

At the International College graduation ceremony. distinguished guests from various countries attended, witnessing the educational ties between Taiwan and the international community. Graduates demonstrated excellent performance and academic achievements.

Since its establishment in 1998, the International College has cultivated more than 500 students from over 50 countries around the world.

**Promoting International Exchanges and Building a Sustainable Food Processing Chain** 

**Deepening Agricultural Education Linking Local and International Practices** in Sustainability







Assistant Professor Huang Chao-Wei of the Depart-ment of Tropical Agriculture and International Co-operation, together with faculty members from the Department of Animal Science, visited New Zealand's Business College for cooperation and exchange in meat processing technology, promoting international cooperation, resource efficiency, and low-carbon food processing development.



Through flipped teaching, students are encouraged to focus on agriculture, food security, and climate change. The University collaborates with Neipu Township to support small farmers, develops sustainability courses with a focus on bees, and at the same time advances international exchanges and local practices.

### College of Veterinary Medicine



With the mission of "Enhancing the health and well-being of animals, humans, and ecosystems through innovative and excellent teaching, research, and service." The College continues to uphold the social responsibilities entrusted by industry, government, and academia in animal disease diagnosis and research, vaccine adjuvant development, and wildlife conservation medicine. It strives to stand at the forefront of global sustainability in the emerging biomedical industry, unleashing infinite potential and creating new prospects for veterinary medicine.

- · Department of Veterinary Medicine
- Graduate Institute of Animal Vaccine Technology
- · Institute of Wildlife Conservation

### Sustainability Highlights

Smart Pig Farming for Sustainable
Upgrading
Promoting the Development of Rapid
Diagnostic Technologies for Epidemics

Cross-Disciplinary Training of Pet Care
Talents
to Fulfill International University Social
Responsibility







Through cross-disciplinary integration, the University has developed rapid diagnostic chips for swine diseases and sustainable pig farming technologies, while cultivating international talents. These efforts enhance disease prevention and control in the in-dustry, improve environmental performance, and accelerate the upgrading of the pig farming industry.



By integrating expertise in veterinary medicine, social work, and other disciplines, the University promotes pet care and free clinics in rural areas, and collaborates with Vietnam to cultivate international talents, thereby practicing sustainable care and so-cial responsibility.

### **Sustainability Practices**

Jointly Creating the "Veticle Veterinary Imaging Cloud Platform" with InnoCare Optoelectronics Corp.

Launching the Public Welfare "Taichung Animal Blood Bank Center Project" with National Animal Business Groups

3.8 12.8 17.16

3.7 9.5



Through industry—academia cooperation,
Taiwan's largest veterinary Al imaging database
has been established, and Al medical imaging
analysis mod-els have been developed. The
"Veticle Veterinary Imaging Cloud Platform"
has been launched to improve the accuracy
of veterinary diagnoses and promote the
development of smart pet healthcare.

THC 中部物面压中,以以为中部的压力。

Adhering to the philosophy of "Saving Lives, Creating Happiness," the University's Veterinary Transfusion Medicine Center, together with animal hospitals nationwide, established the Taichung Blood Bank to promote pet blood donation as a public welfare initiative. To date, 159 pets have been recruited as blood donors, rescuing more than 600 animals and improving the quality of veterinary transfusion medicine.

Partnering with Farglory Life Insurance for Owl Conservation

Mountain Hawk-Eagle Simulated Feather and Indigenous Cultural Exhibition

11.a 12.8 15.5 17.<u>17</u>





In collaboration with Farglory Life Insurance, the "Protecting Hundreds of Millions of Owls" project has entered its fourth year with remarkable achievements. The sharing session showcased owl conservation and ecological education outcomes, jointly advancing ecological conservation and social responsibility.



The exhibition aimed to preserve indigenous culture and protect the ecology of the mountain hawkeagle. It displayed 33 innovative simulated feather ornaments, feather fans, and headdresses of mountain hawk-eagles, and explored the historical culture and ecological conservation of the Paiwan and Rukai peoples.





The University cultivates students according to their aptitude and potential development. Students are free to take cross-disciplinary micro-credit courses offered by the College to build personalized learning plans. They actively learn the latest knowledge in frontier technologies, innovation and entrepreneurship, and industrial marketing, enabling them to align with career development and industry needs in real time, and to become high-quality talents in future technology.

Program of Artificial Intelligence and Mechatronics

### Sustainability Highlights

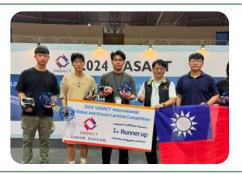
Collaboration with Navy, Air Force, and Academia Sinica on Al and ESG Technologies Wins Double Gold at the **International Warsaw Invention Show** 

Recognition at the 2024 UASACT **International Drone Competition** 

9.4 9.5 13.3 17.6







Professor Hsu Tzu-Kuei's team won two gold medals and a Special Contribution Award at the 17th International Warsaw Invention Show in 2023, showcasing achievements in environmental sustainability and Al invention technologies, bringing Taiwan's technological strength to the world stage.

The University's drone soccer team excelled at the 2024 UASACT International Competition, winning third place in the collegiate and social group category, fully demon-strating Taiwan's technical capabilities and educational achievements in Al. drones, and robotics.

### **Sustainability Practices**

Disadvantaged Students in the Vision Program Pursue Dreams— **Heavy-Lift Drone Successfully Takes** Flight

**Cultivating Smart Mechatronics Talents in** Kaohsiung and Pingtung— **NPUST AloT Robots Draw Attention** 

4.3 8.2 9.5

4.5 9.4 10.3



The Program of Artificial Intelligence and Mecha-tronics collaborated with industry to organize an AloT Smart

For the first time, disadvantaged students from the Uni-versity's Vision Program participated in the Taiwan Drone Creative Design Competition. Their heavy-lift drone won fourth place, showcasing students' potential and confi-dence.

Popular Science Island-Wide Train Campus Promotion— **NPUST USR Scientific Innovation** for Rural Areas

"Jingsi Lake Science Explorer Camp" Brings **Together Rotary Clubs and Child Welfare Services to Empower Disadvantaged Students** in Rural Areas with Technology

Environmental Sensing Application Teacher Workshop,

enhancing the effectiveness of science and technology

education in the Kaohsiung-Pingtung region and

cultivating future smart mech-atronics talents.

4.7 17.16



The University's USR team, in collaboration with multiple partners, organized a science fair and national defense technology experience at Linbian Elementary School and Renhe Elementary School, promoting popular science education and community engagement.



The University combined industry-academia re-sources and social welfare support to jointly hold the "Jingsi Lake Science Explorer Camp" for senior high school and vocational school students in the southern Kaohsiung-Pingtung region. The camp enabled students to explore Al and technology, igniting their passion for future agricultural technology.

9.5 10.2

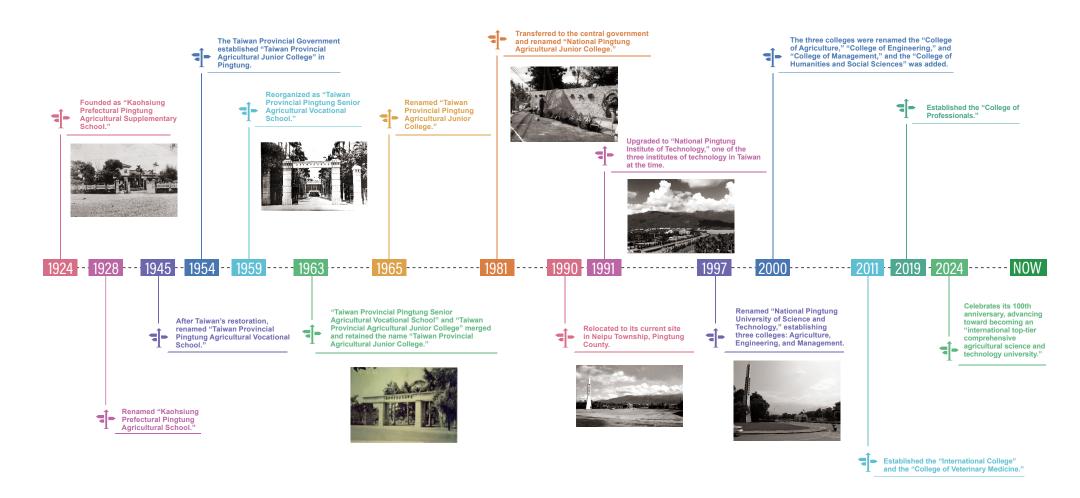


國立屛東科技大學

### 1-1 Sustainability Evolution

### **University History and Development**

National Pingtung University of Science and Technology (hereinafter referred to as NPUST or the University) was founded with agriculture as its foundation. Established in 1924, the University has reached its centennial milestone. Through multiple waves of innovation and transformation, it has evolved from an early agricultural vocational school into an agricultural science and technology university that places equal emphasis on teaching and research.



### Organizational Overview GRI2-1 \ 2-6 | SV-ED-000.A

The University is affiliated with the Department of Technological and Vocational Education under the Ministry of Education and is categorized under the education service sector. The president oversees overall university affairs, represents the University externally, and is responsible for its development. Three vice presidents — for academic affairs, administrative affairs, and educational affairs assist the president in promoting university operations. In addition, there are 17 first-level administrative units responsible for policy planning and implementation. Furthermore, academic units include seven colleges with 50 departments, programs, and special degree programs dedicated to teaching, research, and extension, ensuring the smooth operation and development of all university affairs.

### **♦** Basic Information

Chin-Lung Chang
ttps://wp.npust.edu.tw/
ttps://sustainability.npust.edu.

Academics	Colleges	7
	Departments and programs	50
	Number of Students	10,394
	First-level units	17
Administration	Second-level units	55
Affiliate	14	

<sup>\*</sup> Student numbers are based on Academic Year 2023.

### Campus Scope

Vision and Strategies of

1. a Sustainable University

	Main Campus	Downtown Campus	Baoli Experimental Forest	Daren Experimental Forest
Campus	TANKS AND ADDRESS			Total Ballion Control
Purpose	Teaching and research	Internship and animal medical services	Practice Agricultural Station	Practice Agricultural Station
Area (hectares)	297	0.1735	268	576
Address	No. 1, Xuefu Road, Neipu Township, Pingtung County.	No. 151, Xinyi Road, Pingtung City, Pingtung County	No. 20, Zhushe Road, Baoli Village, Checheng Township, Pingtung County	South Link Highway, Daren Township, Taitung County

After relocating to the Neipu Campus, which is nestled against Dawu Mountain and alongside the Donggang River, the University now occupies a campus area of approximately 300 hectares, with building space exceeding 30 hectares, making it the largest comprehensive university campus in Taiwan in terms of main campus area. With its rich natural landscapes and ecological environment, the University enjoys the reputation of being a "National Park University" and is also widely recognized as the most ecologically diverse green and LOHAS (lifestyles of health and sustainability) campus in Taiwan.

In addition to the Neipu main campus, the University has two experimental forests, Baoli and Daren, which serve as teaching and experimental bases for forest management, environmental conservation, and forestry research. The Downtown Campus was originally established to provide continuing education and social education courses. Since 2023, it has been transformed into a new campus for the University's Veterinary Teaching Hospital. The original extension education services have been consolidated into the Office of Extension Education at the Neipu main campus.

The Downtown Campus is currently in the final stages of construction and is expected to introduce advanced imaging equipment, including a 128-slice computed tomography (CT) scanner and a 1.5T magnetic resonance imaging (MRI) system, to establish an imaging medical center. This will significantly enhance veterinary medical capacity and teaching quality in southern Taiwan.

cademics

50

Vice President for Academic Affairs

### ◆ Organizational Chart of National Pingtung University of Science and Technology (First half of Academic Year 2024)

### College of Agriculture: 12

- 1. Department of Plant Industry (Including 4-year technology day school, in-service master's program, master's program, PhD program)
- 2. Department of Food Science (This includes four-year daytime programs, four-year continuing education programs, in-service master's programs [admissions suspended starting Academic Year 2025], master's programs, and doctoral programs.)
- 3. Department of Forestry (Including 4-year technology day school, master's program)
- 4 Department of Aquaculture (Including 4-year technology day school, master's program, PhD
- 5. Department of Animal Science
- cluding 4-year technology day school, master's program)
- 6. Department of Plant Medicine Including 4-year technology day school, master's program)
- 7. Department of Wood Science and Design luding 4-year technology day school, master's p
- Department of Biological Science and Technology Including 4-year technology day school, master's program
- 9. Institute of Food Safety Management (Master's program) (Suspended in AY2023)
- 10. Graduate Institute of Bioresources (PhD Program)
- 11. Bachelor of Program in Scientific Agriculture
- 12. Executive Master of Food Biotechnology (admissions suspended starting Academic Year 2025 )

### College of Engineering: 9

- 1. Department of Environmental science and Engineering (Including 4-year technology day school, in-service master's
- program, master's program, PhD program) 2. Department of Civil Engineering (Including 4-year technology day school, 4-year technology continuing education program, in-service master's program master's program, PhD program
- 3. Department of Mechanical Engineering (Including 4-year technology day school, 4-year technology continuing education program, master's program)
- 4. Department of Soil and Water Conservation ncluding 4-year technology day school, master's program)
- 5. Department of Vehicle Engineering (Including 4-year technology day school, master's program)
- 6. Department of Biomechanical Engineering (Including 4-year technology day school, 4-year technology continuing education program, master's program)
- 7. Department of Materials Engineering (Including master's program and four-year daytime program)
- 8. Bachelor Program in Environmental Resources and Disaster Prevention (Four-year continuing education program) (admissions
- spended starting in the 2021 academic year) 9. Undergraduate Program in Advanced Materials suspended starting in the 2021 academic year)

### College of Management: 11

- 1. Department of Agribusiness Management (Including 4-year technology day school, in-service master's 1. Department of Social Work rogram master's program
- 2. Department of Management Information (Including 4-year technology day school, in-service master's program, master's program
- 3. Department of Industrial Management (Including 4-year technology day school, in-service master's 3. Department of Recreational Sports and program, master's program
- 4. Department of Business Administration (Including the four-year daytime program, master's degree program for working professionals, master's degree program, and four-year continuing education program (admissions suspended starting in the 2021 academic year))
- 5. Department of Fashion Design and Management (Including 4-year technology day school, master's program)
- 6. Department of Hotel and Restaurant Management
- (Including 4-year technology day school, master's program) 7. Institute of Landscape Architecture and Recreation Management
- (master's program 8. Institute of Finance (In-service master's program) (admissions suspended starting in the 2017 academic year)
- 9. Graduate Institute of Management of Innovation and Technology (In-service master's program, master's program) (admissions suspended starting in the 2020 academic year)
- 10. International Degree Program in Finance 11. Executive Master of Business Administration

### College of Humanities and Social Sciences: 8

- (Including 4-year technology day school, 4-year technology continuing education program, master's orogram)
- 2. Department of Modern Languages (Including 4-year technology day school, master's
- Health Promotion (Including 4-year technology day school, 4-year technology continuing education program, in-service master's program, master's program)
- 4 Department of Child Care (Including 4-year technology day school, master's
- 5. Center for Teacher Education Program
- 6. Center for General Education
- 7. Institute of Technical and Vocational Education (In-service master's program, master's program)
- 8. Graduate Institute of Hakka Cultural Industry (master's program)

### College of Professionals: 1

1. Program of Artificial Intelligence and Mechatronics

(Division of Administration, Division of Research and Evaluation)

General Research Service Center

### International College: 6

- 1. Department of Tropical Agriculture and International Cooperation (Including 4-year technology day school, master's program, PhD
- 2. International Master's Degree Program in Food
- (Master's program) (Suspended in AY2022) 3. International Master's Program in Soil and Water Engineering
- (Master's program) (Suspended in AY2022) 4. International Master's Program on Agribusiness
- (Master's program) (Suspended in AY2022)
- 5. International Program in Ornamental Fish Technology and Aquatic Animal Health (Including Master's Program (admissions suspended starting in the
- 2022 academic year) and Doctoral Program) 6. International Degree Program in Animal Vaccine

(Including Master's Program (admissions suspended starting in the 2022 academic year) and Doctoral Program

#### College of Veterinary Medicine: 3

- 1. Department of Veterinary Medicine (Including 4-year technology day school, master's program and
- 2. Graduate Institute of Animal Vaccine Technology (master's program
- 3. Institute of Wildlife Conservation (master's program)

(12) Office of Vice President for Administrative Affairs dministrative (12 first-leve second-level) Ø units

#### Office of General Affairs

(Documentation, General Service, Cashier, Property Management Construction and Maintenance Section)

Office of Research and Development

(Division of Research Promotion, Division of Technological Cooperation, Center for University-Industry Collaboration Center for Technology Transfer, Center for Innovation and Incubation, Laboratory Animal Center)

Office of International Affairs

(Education Division, Cooperation Division, Development

#### Office of Secretariat

(Administrative Division, Legal Affairs & Project Workforce Division, Institutional Research & Development Division)

Personnel Office (Division I. Division II)

Accounting Office (Division of Budgeting, Division of Accounting)

Physical Education Department (Division of Competitions, Division of Venues and Equipment)

### Library and Exhibition Hall

(Technical Service Division, Reader Service Division, Exhibition

Computer Center

(Division of Teaching and Research, Division of System Management, Division of Network Management)

Center for Environmental Protection, Safety and Health (Division of Environmental Protection, Division of Safety and Health)

Language Center

(Division of Foreign Language Teaching, Division of Language Tests and Equipment, Mandrain Language Section)

### Farm

**Affiliated** 

units

(14)

**Experimental Forest** 

Livestock Range

Horticultural Station

Aquaculture Farm

Veterinary Teaching Hospital

Food Processing Plant

Wood Processing Factory

Hydraulic Engineering Laboratory

Machinery Workshop

Vehicle Workshop

Agricultural Machinery Training

Agricultural Machinery Museum

Animal Disease Diagnostic Center

Administrative ဖြ (5 first-leven) 9 second-le leve level) units

Office of Vice President for Educational Affairs

#### Office of Academic Affairs

(Registration Division, Curriculum Division, General Academic Affairs Division, Continuing Education Division, Center for Teaching Excellence)

#### Office of Student Affairs

(Extracurricular Activities Guidance Section, Student Life Guidance Section, Health and Wellness Section, Student Counseling Center, Indigenous Student Resource Center, Military Training Office)

(Education Division, Service Division, General Affairs Division)

Office of Continuing and Extension Education

#### Office of Career Development (Career Guidance Division, Employment Guidance Division

Interdisciplinary Features Development Center (Research Division, Interdisciplinary Teaching Division)

### 1-2 Sustainability Governance Structure GRI2-9~2-13 \ 2-18

### **University Affairs Meeting – Highest Governance Body**

As a public technological and vocational institution, the University does not have a board of directors. In accordance with Article 36 of the University Act, the University has established its organizational regulations, designating the "University Affairs Meeting" as its highest decision-making body. The University Affairs Meeting is convened by the president and held at least twice each academic year. It makes decisions on major university affairs and deliberates and supervises matters related to the University's sustainable governance, environment, and stakeholders.

### **♦** Composition of the University Affairs Meeting



Except for the representatives of academic and administrative officers whose UC term will be the same as their academic and administrative positions, the term of all other UC representatives will be one academic year.

(The term "tenure" is used in GRI (2021) (Disclosure 2-9 Governance structure and composition). However, the same term has another meaning in university administration (Tenure: https://en.wikipedia.org/wiki/Academic\_tenure).) Additionally, the chairperson of the Alumni Association Board is invited to attend the meetings to incorporate diverse opinions and ensure a balanced decision-making direction within the University.

### ◆ Number and Gender of Representatives at the University Affairs Meeting

Academic year	20	)22	2023		
Gender Representative	Male	Female	Male	Female	
Academic and administrative supervisors	16	5	15	5	
Academic Staff	30	10	27	13	
Representatives of teaching assistants, staff, military nurses, contract personnel, general workers, and campus security personnel	4	5	4	5	
Student representatives	6	2	7	1	

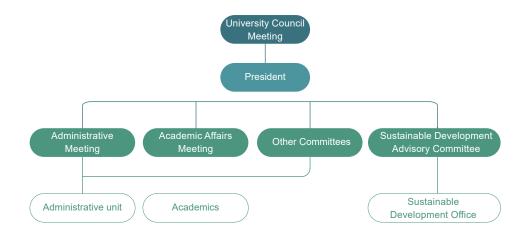
Performance Evaluation of Major Resolutions of the University Affairs Meeting:

- At the first University Affairs Meeting of each academic year, the president presents the Annual University Affairs Report.
- The Sustainable Development Advisory Committee supervises the promotion of sustainable development work.
- The Secretariat submits the "Annual Financial Planning Report" and the "Annual University Fund Performance Report" each academic year. After review and approval by the University Affairs representatives, the reports are submitted to the Ministry of Education for record.
- 4. 4Through internal control mechanisms and external evaluation mechanisms, the University's sustainable governance performance is reviewed.

### **Operation of Committees**

The University's administrative organization is established and adjusted as needed according to the University's development plan, with separate regulations governing the establishment of administrative, research, and teaching units. In accordance with Articles 10 to 27 of the Organizational Regulations, the president appoints administrative and academic unit heads, faculty representatives, and external members to form the "University Development Committee," which promotes and deliberates on university development affairs. Task forces or working teams are formed in accordance with the organizational charter to address economic (EC), environmental (E), and people (P) impacts. Additionally, stakeholders within the school will be the members or participate in these task forces and working teams to conduct performance evaluation.

\* Please refer to the Organizational Charter of National Pingtung University of Science and Technology for the details regarding the composition of NPUST committees.

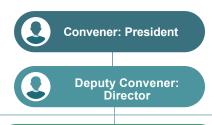


To promote sustainable development and fulfill social responsibility, the University established the "Office of Sustainability" (hereinafter referred to as the Office) in 2020. The United Nations Sustainable Development Goals (SDGs) are integrated into education, research and development, operations, and social services. Led by the vice president for academic affairs, who serves as director, along with an executive director, deputy executive director, executive secretary, and assistants, the Office inventories on-campus sustainability resources, integrates sustainability initiatives across various units, and advances comprehensive sustainable governance to ensure that university development aligns with international standards.

2024 NPUST Sustainability Report

In addition, the University established the "Sustainable Development Advisory Committee" (hereinafter referred to as the Committee), chaired by the president and vice-chaired by the vice president for academic affairs. The Committee consists of 26 members and convenes at least once each academic year. Based on the University's four major development axes "Technological Agriculture," "Ecological Industry," "Platinum Society," and "Sustainable Economy"— the Committee identifies significant sustainability topics of concern to NPUST's stakeholders, evaluates and deliberates on the University's sustainability policies, supervises the promotion of a sustainable campus, and facilitates cross-unit coordination.

**♦** Sustainable Development Advisory Committee



Sustainable Development Advisory Committee - Core Executive Group GRI2-14 \ 2-16 \ 2-17

· Dean of Academic Affairs

Chief Secretary

**Governance Advisory** 

- · Director of General Research Service Center
- · Dean of Research & Development Department
- Dean of College of Management
  - Director of Career Services
- · Director for Personnel Office
- Director for Accounting Office
- Director of Center for Teacher Education

Dean of General Affairs

**Environmental Advisory** 

**Committee Member** 

- · Director of Research Center for Environmental Science & Technology
  - Director of Computer Center
  - · Dean of College of Agriculture
  - · Dean of College of Engineering
- · Dean of College of Veterinary Medicine
- · Dean of College of Professional Studies



Social Advisory Committee Member

- Dean for Student Affairs
- · Director of The Interdisciplinary Features **Development Center** 
  - Dean of International Affairs
  - · Dean of Continuing and Extension Education
  - Director of Center For General Education
  - · Dean of Library and Exhibition Hall
- Dean of College of Humanities & Social Science
  - · Dean of College of International Studies

4

Sustainability Milestones

2015

- Incorporated the United Nations Sustainable Development Goals (SDGs) into the University's mid- to long-term development plan.
- Established the four major development axes: "Technological Agriculture,"
   "Ecological Industry," "Platinum Society," and "Sustainable Economy."

2021

- Published the first sustainability report and received the TCSA Platinum Award for University Sustainability Report.
- Established the "Future Dreams and Technology Hall Meng Hsiang Gymnasium 2.0," the "Smart Media Innovation Center," and the "Sustainable Health Care Center."
- Signed a memorandum of understanding (MOU) with the Taiwan Institute for Sustainable Energy (TAISE).
- Co-organized the "Soka SDGs × Seeds of Hope and Action Exhibition" with Taiwan Soka Association.
- Participated in the THE Impact Rankings for the first time, ranking No. 1 among technological universities in Taiwan.
- Ranked No. 1 in Taiwan and No. 4 in Asia for eight consecutive years in the UI GreenMetric World University Rankings.
- Received the first prize in the "Eco-Friendliness Category" at the second Global Views University Social Responsibility Awards.

2024

- Conducted the first campus greenhouse gas inventory and obtained external verification.
- Invited by the National Council for Sustainable Development, Executive Yuan, to participate in the "2050 Net Zero City Expo," showcasing sustainability initiatives.
- Hosted the "2024 APEC Industry-Academia Exemplary Workshop" delegation arranged by the Ministry of Education.
- Co-founded the "Taiwan Ecotourism and Local Revitalization Alliance" with the Taiwan Ecotourism Association.
- Established the "Technological Agriculture Center."
- Ranked No. 1 among technological universities in Taiwan for four consecutive years in the THE Impact Rankings and ranked within the global 101–200 range, showing significant progress.
- Ranked No. 1 in Taiwan and No. 2 in Asia for eleven consecutive years in the UI GreenMetric World University Rankings.
- Ranked No. 1 among public technological universities in the CommonWealth USR University Citizenship Survey.
- Received the "Model Award for Well-being and Co-living" at the fifth Global Views University Social Responsibility Awards.

2020

- Established the "Office of Sustainability" and the "Sustainable Development Advisory Committee."
- Established the "Smart Agriculture Center and Smart Agricultural Production Demonstration Base."
- Ranked No. 1 in Taiwan and No. 4 in Asia for seven consecutive years in the UI GreenMetric World University Rankings.
- Received the first Global Views University Social Responsibility Awards
   "Model Award for Co-living in Daily Life" and "Model Award for Eco-Friendliness."

2022

- Established the "Sustainability R&D Center," the "Tropical Organic Agriculture Net Zero and Carbon Sequestration Promotion Office," the "Agricultural Product Value-Adding Prototyping Center," the "Smart Mechatronics Hall," the "Smart Agricultural Machinery Center," the "Big Data and 3D Printing Center," and the "Class C Baseball and Softball Field."
- Formed the "Kaohsiung and Pingtung Region Agricultural Product
  Value-Adding Prototyping Alliance" in collaboration with the Kaohsiung
  District Agricultural Research and Extension Station, Ministry of Agriculture.
- Co-organized the "2022 Youth Sustainability Empowerment Workshop SDGs Capacity-Building Program" with President Chain Store Corporation and Unity Sustainability Services.
- Co-founded the "Taiwan University Alliance for Sustainable Governance" with nine universities.
- Ranked No. 1 among technological universities in Taiwan for two consecutive years in the THE Impact Rankings.
- Ranked No. 1 in Taiwan and No. 3 in Asia for nine consecutive years in the UI GreenMetric World University Rankings.
- Published the second sustainability report and received the TCSA Gold Award for University Sustainability Report.
- Received the "National Sustainable Development Award (Education Category)" from the Executive Yuan in 2023.
- Collaborated with Taiwan Sustainability Hub to establish the TSH@NPUST "1.5°C Food and Consumption Transition Hub."
- Established the "Smart Agriculture Innovation Micro Park" (for startup incubation).
- Ranked No. 1 in Taiwan and No. 4 in Asia for ten consecutive years in the UI GreenMetric World University Rankings.
- Ranked No. 1 among technological universities in Taiwan for three consecutive years in the THE Impact Rankings.
- Received the first prize in the "Green Campus Category" and the "Model Award for Well-being and Co-living" at the fourth Global Views University Social Responsibility Awards.

1

Sustainable University

Governance and

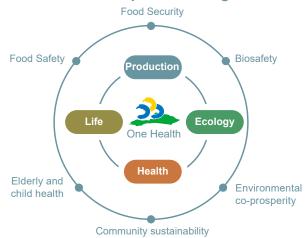
2. Performance (G)

### 1-3 Vision and Action Strategies for Sustainable Development GRI2-22

As a national think tank for development, a university has responsibilities beyond talent cultivation. It must also leverage its influence to become both an advocate and a practitioner of sustainability, coexisting and thriving together with the environment and society. NPUST's past contributions to sustainable development have maintained a balanced approach across the three dimensions of E (environmental protection), S (social responsibility), and G (university governance). Through the regular publication of reports, the University comprehensively inventories data and information related to sustainable development across various dimensions — including university governance, teaching and research, campus culture, campus environment, and social engagement. From the perspectives of balanced development and systems thinking, the University continues to strengthen sustainability in environmental and ecological aspects, strives to bridge the gap between technology and nature, brings humanities and ecology closer together, and fulfills university social responsibility and the United Nations Sustainable Development Goals through organizational growth and interdisciplinary collaboration.

Located in the heart of Taiwan's agricultural region in the south, NPUST has, through years of dedicated effort, established a leading position in tropical agricultural education and technological development. In order to achieve ESG goals and align with the international concept of "One Health," the University has incorporated the United Nations Sustainable Development Goals (SDGs) into its mid- to long-term development plan, identifying four major development axes: "Technological Agriculture," "Ecological Industry," "Platinum Society," and "Sustainable Economy." With "Three Lives, One Health" — comprising "Precision Production," "Precision Ecology," and "Precision Living" — as its implementation strategy, the University promotes food security, food safety, biosafety, health for the elderly and young, community sustainability, and environmental symbiosis, thereby realizing "Three Lives Co-Prosperity" and a virtuous cycle of "One Health" shared by animals and humans.

### **♦** Sustainable Development Strategies



#### **University Governance and Sustainable Development** International top-tier comprehensive agricultural Vision science and technology university Positioning A practice-oriented teaching and research university Educational Cultivating professionals required by various Philosophy industries Educational Professionalization, Internationalization, Holistic **Objectives** Education

### Agro-Technology

- Processing (food science and wood science and design)
- ◆ Materials (bioresources, vaccine technology, veterinary medicine,
- Production (animal science, tropical agriculture, aquaculture, forestation, scientific agriculture)

### **New Agriculture Era**

- ♦ New technology
- ◆ Operations diversification Marketing cultivation and innovation
- ♦ 1x2x3: Sixth industrialization of agriculture











### Eco-Technology

- ♦ Energy (bioresources, biomechatronics, vehicle engineering, mechanical engineering, materials engineering)
- Facility (soil and water conservation, civil engineering, environmental resources and disaster prevention)
- ♦ Conservation (environmental science and engineering, wildlife conservation)
- ◆ Processing (food science and wood science and design)
- ♦ Materials (biological science and technology, vaccine technology, veterinary
- ◆ Production (animal science, tropical agriculture, aquaculture, forestation, scientific agriculture)

#### Conservation of **National Resources**

- Soil and water conservation and disaster prevention
- ◆ Green energy field factory
- ◆ Symbiotic Agriculture
- ◆ Special-purpose electric

### Life. Health, and Recreation

- ♦ Health/functional food production
- ◆ Food safety and management
- ◆ Technology and human-centered

hotel and restaurant management)

Platinum Society

◆ Management and marketing (business administration, management

recreation management, recreational sports and health promotion,

◆ Cultural and creative (technological and vocational education, general

education, Hakka cultural industry, modern languages, fashion design

Processing (food science and wood science and design)

information systems, finance, agribusiness management)

♦ Well-Being (social work, child care, landscape architecture and

◆ Agro-ecotourism

and management)









### Conservation and **Development**

- ♠ Creation of protection industries
- ♦ Planning eco-tourism
- Innovation for rural communities
- ◆ Circular economy of net-zero

### Sustainable Economy

- ♦ Well-Being (social work, child care, landscape architecture and recreation management, recreational sports and health promotion, hotel and restaurant management)
- ♦ Cultural and creative (technological and vocational education, general education, Hakka cultural industry, modern languages, fashion design and management)
- ♦ Energy (bioresources, biomechatronics, vehicle engineering, mechanical engineering, materials engineering)
- ♦ Facility (soil and water conservation, civil engineering, environmental resources and disaster prevention)
- ♦ Conservation (environmental science and engineering, wildlife conservation)
- ♦ Production (animal science, tropical agriculture, aquaculture, forestation, scientific

### **Strategic Analysis and Response Measures**

Based on a SWOT analysis conducted through university affairs research, the University will leverage the advantages of smart technology and natural resources to develop "six-level tropical agriculture" and will continue to strengthen its specialization in "tropical agriculture" to enhance international competitiveness. By integrating the resources of its seven colleges — the College of Agriculture, College of Engineering, College of Management, College of Humanities and Social Sciences, International College, College of Veterinary Medicine, and College of Professionals — the University will increase opportunities for industry-academia cooperation and attract outstanding students. These efforts will help address current challenges in teaching and research and overcome the threats posed by declining birth rates.



### Strength

2024 NPUST Sustainability Report

- Model of a Sustainable University
- Since 2014, ranked No. 1 nationwide in the "Green University" rankings for 11 consecutive years.
- In 2024, ranked No. 1 among technological universities nationwide in the "THE Impact Rankings."
- In 2024, ranked No. 1 among public technological and vocational universities in the CommonWealth "USR University Citizenship" survey.
- The largest single campus in Taiwan, with over 120 hectares of on-campus internship fields and practical training facilities.
- O Deepening International Exchange
- Serving as the permanent secretariat of the University Network for Tropical Agriculture (UNTA) and host of the Thailand-Taiwan Education Center, assisting the government in promoting the New Southbound Policy and expanding the recruitment of international students to study in Taiwan.
- · Has established sister-school partnerships with 299 universities in 50 countries across five continents.



### **Opportunity**

- O Close Industry–Academia Linkages
- Formed an industry-academia cluster with the Pingtung Science and Technology Park to establish a comprehensive one-stop service.
- Established the "Industry-Academia Collaboration Center" and the "Technology Transfer Center" to provide rapid, convenient, and professional consulting services, coordinating project development, technology matchmaking, contract negotiation, commercialization, and project management.
- O Alignment with National Development Policies
- Supports the government's promotion of the "Six Core Strategic Industries" and "Five Trusted Industries."
- Given Taiwan's similar climate to Southeast Asian countries, the University assists both diplomatic allies and non-allied countries in developing tropical agricultural technologies, expanding Taiwan's soft diplomatic power.



### Weakness

- O Campus Location and Scale
- · Located in a remote area with inconvenient transportation, making faculty recruitment and student enrollment challenging.
- Due to the vast campus area, additional resources and funding are required for personnel management and facility maintenance.
- O Daily Foreign Language Usage Environment
- · Domestic students' foreign language proficiency still needs gradual improvement.
- The English-language environment in administrative units still has room for enhancement.



### Threat

- Impact of Declining Birth Rate
- The declining birth rate problem is more severe in southern Taiwan, making student recruitment difficult for the University, which primarily draws students from the region.
- Smart Agricultural Technology Has Become a Prominent Field
- International students have many choices within Taiwan and may not necessarily enroll at the University.
- Agricultural science and technology have become a major field, with many domestic universities emerging as strong competitors with similar characteristics.
- O Intense Competition in International Student Recruitment
- · China, Japan, South Korea, and India offer substantial scholarships to actively attract students from Southeast Asia and Africa.
- O Popularization of Higher Education and Transformation of Technical and Vocational Education
- Traditional social values prioritize academic advancement, resulting in the perceived value of technical and vocational education being lower than that of
- The popularization of higher education has led to credential inflation, increasing job market competition and lowering salaries.
- O Industrial Structure Issues in Southern Taiwan
- Rural areas in southern Taiwan face labor shortages and an aging workforce. Industrial growth momentum mainly comes from small and medium-sized enterprises, which tend to place less emphasis on research and innovation.



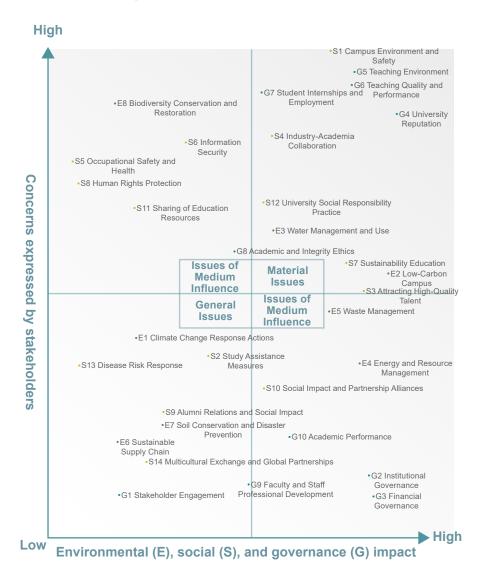
### 1-4 Identification of Material Topics and Management Policies GRI2-29 \ GRI3-1~3-3

### **Identification of Material Topics**

After deliberation and confirmation by the University's Sustainable Development Advisory Committee, the University's stakeholders are categorized into eight major groups: current students, parents, faculty and staff, alumni, government, non-governmental organizations and community members, enterprises, and suppliers. To more comprehensively collect, examine, analyze, and respond to stakeholder concerns regarding material topics related to sustainable development, the University has planned the operational procedures for identifying material topics based on the GRI Standards (2021). It has defined a methodology for identifying material topics that align with the University's operations and established an impact-based materiality analysis process. This process involves four main steps: "collection and identification, questionnaire survey, analysis and validation, disclosure and response, and boundary analysis," through which the identification and analysis of material topics are conducted.

Steps	Description
Collection and Identification of Sustainability Topics	In response to global net-zero carbon emission trends, the current status and trends of sustainability reporting in Taiwan and the Asia-Pacific region, the United Nations Sustainable Development Goals (SDGs), the GRI Standards, the THE Impact Rankings, and the UI GreenMetric World University Rankings, the University collected a wide range of sustainability topics. It consolidated a total of 32 focus topics across the three dimensions of sustainability — governance (G), environmental sustainability (E), and social inclusion (S) — to serve as the basis for the questionnaire survey. These topics were reviewed and confirmed by the University's Sustainable Development Advisory Committee.
Questionnaire Survey	In accordance with the GRI Standards' principles of stakeholder inclusiveness, sustainability context, and completeness, the University designed a sustainability topic questionnaire. From September to December 2024, the questionnaire was distributed in both paper and online formats to survey stakeholders on their level of concern regarding sustainability topics and to assess the level of impact these topics have on the University's operations as evaluated by first- and second-level senior management. A total of 1,204 concern questionnaires and 55 impact questionnaires were collected.
Analysis and Validation	Based on the stakeholder questionnaires, the level of concern for each sustainability topic was analyzed to reflect stakeholder expectations. Additionally, surveys from first- and second-level senior management were analyzed to assess the degree of impact that environmental, social, and governance topics have on the University's operations. Quantitative statistical analysis was conducted to validate the significance of these topics and their impact on the University. The analysis identified a total of 10 "material topics," 13 "moderate topics," and 9 "general topics," and an topic materiality matrix was created.
Disclosure and Response	For material topics, the University prioritizes their disclosure and uses them as the basis for setting short-, medium-, and long-term goals and management policies for sustainable development, as well as for determining funding allocation priorities. Moderate and general issues are considered potential issues for the University; relevant information and progress on these will also be disclosed in the sustainability report.

### **◆ Topic Materiality Matrix**



### Disclosure of Material Issues and Analysis of Their Boundaries GRI2-25

			Boundaries of Impact on Value Chain													
	10 Material Issues	5	Section	Outside of Organization									Correspondence			
Aspect		Current students	Academic and administrative staff	Parents	Alumni	Government	Non- governmental organizations and community members	Business	Suppliers	Positive	Negative	Actual	Potential		Corresponding SDG Targets	Corresponding
Susta	G4 University Reputation	•	•	•	•	0	0	0		<b>√</b>	<b>√</b>		✓	G101 Reputation Management	4.3 16.6	2-7 Sustainability Governance Awards
Sustainability	G5 Teaching Environment	•	•	•	0					<b>√</b>		✓		G102 Campus Development	4.7 9.1	2-2 Campus Environment and Infrastructure
Governance	G6 Teaching Quality and Performance	•	•	•	0					<b>√</b>		<b>√</b>		G103 Faculty Quality	4.3 4.7	2-3 Teaching Quality Assurance and Student Support
nance (G)	G7 Student Internships and Employment	•	0	•	•			•		<b>√</b>		✓		G104 Career Counseling	4.4 8.5	2-4 Student Internships, Employment, and Career Guidance
Enviror Sustaina	E2 Low- Carbon Campus	0	•			•	•	0	•	<b>√</b>		<b>√</b>		GRI 305 Emissions	9.4 13.3	4-2 Low-Carbon Campus and Net- Zero Transition
Environmental Sustainability (E)	E3 Water Management and Use	0	•			•	•	0	•	<b>√</b>		1		GRI303 Water and Effluents	6.3 6.5	4-3 Energy and Resource Management
ဖွ	S1 Campus Environment and Safety	•	•	•	0	0	•		0	<b>√</b>	<b>√</b>	<b>√</b>		S101 Campus Safety	3.4 3.6 11.2 11.7	5-2 Internal Social Inclusion
Social Co-Prosperity	S4 Industry- Academia Collaboration	•	•	0	•	0	0	•		<b>√</b>		✓		S102 Industry- Academia Exchange	8.2 9.5	2-5 Academic Research and Industry-Academia Collaboration
	S7 Sustainability Education	•	•	0		0				<b>√</b>		1		S103 Sustainable Talent	4.7 12.8	5-2 Internal Social Inclusion
y (S)	S12 University Social Responsibility Practice	•	•	0	•	•	•	•	0	<b>√</b>		✓		GRI 413 Local Communities	11.a 12.b	5-3 External Social Inclusion



### ◆ Sustainable Development Promotion Framework and 2024 Material Topics

#### **University Council Sustainable Development Advisory Committee** Convener: President Deputy Convener - Vice President for Academic Affairs cum Director of the Sustainable Development Office Eco-Sustainable **Development Platinum** Agro-**Themes Technology Technology** Society **Economy** SDG 6: Clean Water and SDG 3: Good Health and Wellğ Sanitation SDG 1: No Poverty SDG 4: Quality Education being SDG 7: Affordable and Clean Energy SDG 5: Gender Equality SDG 2: Zero Hunger SDG 11: Sustainable Campus ₽ 9 AND INFEVENTIAL SDG 9: Campus Infrastructure and **Corresponding SDGs** SDG 12: Responsible Research & Development SDG 10: Reduced Inequalities Consumption and SDG 14: Life Below Water (\$) Production 13 CLIMATE SDG 13: Climate Action SDG 16: Peace, Justice and SDG 8: Decent Work and SDG 15: Life on Land Strong Institutions **Economic Growth** 17 PRATIMERSHIPS FOR THE GOALS SDG 17: Partnerships for the Goals Emphasize co-living and co-prosperity with Emphasize the co-benefits and co-living of Develop new-generation agricultural operators industry and ecology. Develop high-quality elderly products and economics, environmental protection, and through technical and vocational education **Action** services to develop talents required by ecology for ecological and environmental Educate and promote plant medicine for and training (TVET) for multifaceted agricultural industries. conservation to create more economic, social, health management to produce safe crops practice, cultivation, and marketing innovation. and employment values. and crops that maintain eco-sustainability. G5 Teaching Environment **G4** University Reputation G7 Student Internships and Employment E2 Low-Carbon Campus Corresponding G6 Teaching Quality and Performance S1 Campus Environment and Safety **Material Topic ESG** S4 Industry-Academia Collaboration E3 Water Management and Use S7 Sustainability Education S12 University Social Responsibility Practice

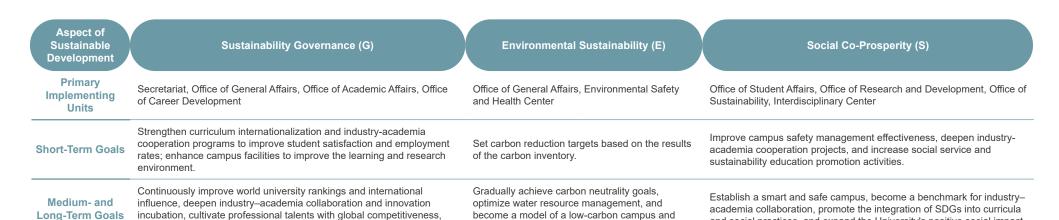
### **Material Topic Management Policy** GRI2-23 \ 2-24

After completing the "Identification of Material Topics," the University, in order to clarify its ESG strategies and positioning, aligns its university development plan with the material topics of concern to stakeholders and corresponds them to GRI material topics to establish management policies. This is done to achieve the dimensions of sustainable governance, environmental sustainability, and social inclusion in sustainable development, and to formulate management policies for each sustainability topic as a pathway toward sustainable development goals.

### **◆ Material Topic Management Policy**

Aspect of Sustainable Development	Sustainability Governance (G)		Environmental S	Sustainability (E)	Social Co-Prosp	Social Co-Prosperity (S)		
	G4 University Reputation	G101 Reputation Management	F2 Law Carban		S1 Campus Environment and Safety	S101 Campus Safety		
Material Topics	G5 Teaching Environment	G102 Campus Development	— E2 Low-Carbon GRI 305 Emissions Campus		S4 Industry-Academia Collaboration	S102 Industry-Academia Exchange		
Corresponding to Material Subjects	G6 Teaching Quality and Performance	G103 Faculty Quality	E3 Water Management	GRI 303 Water and	S7 Sustainability Education	S103 Sustainable Talent		
	G7 Student Internships and Employment	G104 Career Counseling	and Use	Effluent	S12 University Social Responsibility Practice	GRI 413 Local Communities		
Sustainability Management Policy	Management Policy 1: Enlighten Intelligence and Deepen TVET Management Policy 2: Talents Development and Student Fulfillment Management Policy 4: Student Character Formation and Career Development  Sustainability Management Management Policy 6: R&D and University-Industry Collaboration Management Policy 8: Improve Reading Quality and Build An Artistic		Management Policy 7: Too University	wards A World's Top	Management Policy 3: Cultivate Taiwan, I Management Policy 5: Extend Excellent A Responsibilities			
Policy commitment	teaching environment, strengthenir and promoting student internships	The University is committed to enhancing its reputation, optimizing the eaching environment, strengthening teaching quality and performance, and promoting student internships and employment in order to achieve excellence in higher education and fulfill its social responsibility.		d to building a low- ning water resource green energy and energy- neasures, and realizing ty.	The University focuses on promoting campus safety, deepening indus academia collaboration, advancing sustainability education, and fulfilli university social responsibility to cultivate talents with social impact ar promote regional development.			
Specific Action Measures	Promote international and domestic IEET) to improve teaching quality a linkages; optimize smart campus ir sustainable learning environment; career counseling to improve stude competitiveness.	frastructure to provide a safe and enhance industry collaboration and	Establish an energy mana smart air conditioning con efficiency and reduce cart renewable energy and inc generation facilities; stren equipment and water reso water use efficiency and re	trol to improve energy con emissions; promote rease solar power gthen water-saving curce recycling to improve	Strengthen campus security mechanisms and disaster response plans to ensure campus safety; Reinforce industry linkages, promote practice-oriented courses and innovation and entrepreneurship programs; Implement sustainable education by incorporating SDGs into curricula, raising sustainability awareness among faculty and students; promote local care and social services to support regional development and industrial transformation.			

and social practices, and expand the University's positive social impact.

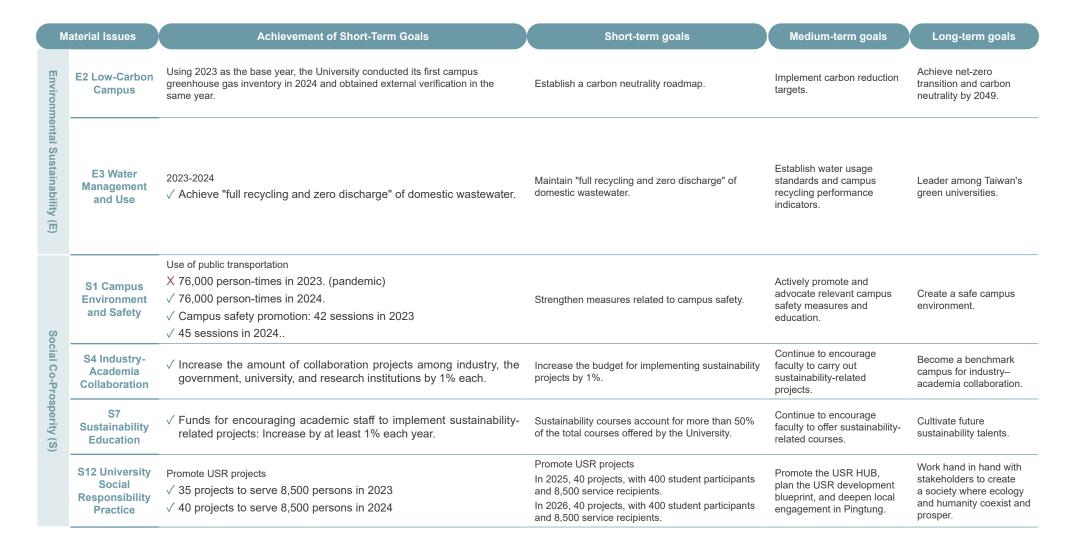


green university in Taiwan.

### **Material Topic Management Policy Objectives**

and build a smart campus for sustainable development.

M	aterial Issues	Achievement of Short-Term Goals	Short-term goals	Medium-term goals	Long-term goals
	G4 University Reputation	Since 2014, ranked No. 1 among all universities in Taiwan for 11 consecutive years in the UI GreenMetric World University Rankings.  Since 2021, ranked No. 1 among technological universities in Taiwan for 4 consecutive years in the THE Impact Rankings.  In 2024, won first place in the public technological and vocational university category of the CommonWealth University Citizen Award.	Continued participation in domestic and international rankings and competitions.	Enhanced university reputation and increased international visibility.	International top- tier comprehensive agricultural science and technology university
Sustainability	G5 Teaching Environment	Expenditure on hardware and software facilities  √ Increase by 1% (NT\$125,000,000) in 2023  √ Increase by 1% (NT\$137,000,000) in 2024	Continuously improve hardware and software facilities across all departments and programs.	Actively increase self- generated revenue and government subsidies to improve the teaching environment.	Ensure education without discrimination, fairness, and high quality.
Governance (G)	G6 Teaching Quality and Performance	Teacher growth and training activities  √ Increase by 3 sessions in 2023  √ Increase by 5 sessions in 2024	Teacher growth and training activities 85 sessions and 2,500 participants in Academic Year 2024 85 sessions and 2,500 participants in Academic Year 2025	Strengthen teachers' professional competencies to enhance the quality of teaching and research.	Implement teaching innovation to increase student engagement in learning.
	G7 Student Internships and Employment	<ul> <li>√ 100% participation rate in on-campus or off-campus internship of fresh graduates every year.</li> <li>√ Obtain 1,500 interdisciplinary professional certifications annually.</li> <li>Organize career counseling and employment guidance activities.</li> <li>√ Hold 200 events annually with 3,000 participants.</li> </ul>	100% participation rate in on-campus or off- campus internship of fresh graduates every year. Career guidance and employment guidance 210 events held in Academic Year 2024. 220 events held in Academic Year 2025.	Enhance guidance and improve employability for a 90% employment rate of fresh graduates every year.	Serve as a cradle for cultivating industry experts and talents that meet societal needs.



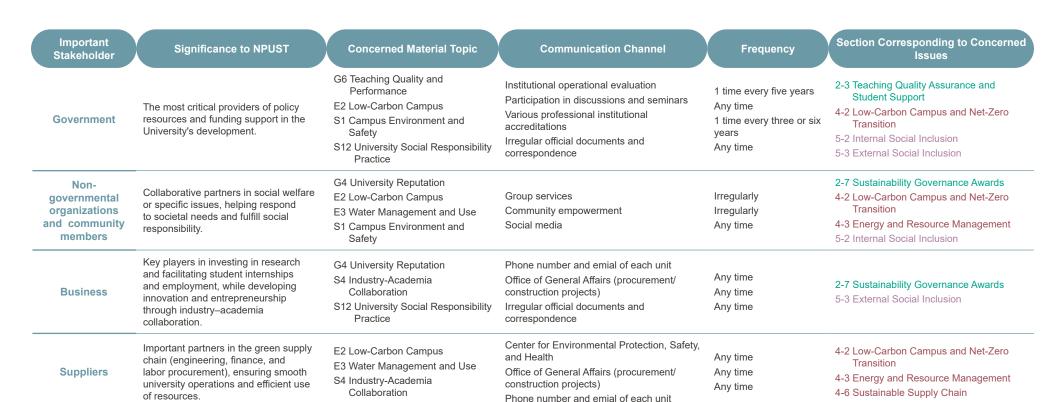


### 1-5 Communication and Engagement with Stakeholders GRI2-25 \ 2-26

Becoming the best partner for stakeholders is one of NPUST's commitments to sustainable development. The University has established effective communication channels with stakeholders to provide them with the necessary information, respond to their feedback in a timely manner, and allow them to participate in school decision-making. Through distributing and analyzing stakeholder questionnaires, the University gains an understanding of the topics of concern to stakeholders and incorporates sustainability topics into campus governance, environmental protection, and social inclusion. By identifying material topics, the University responds to stakeholders, formulates management policies, and revises its sustainability management strategies and long-term goals. This also serves as a guiding principle for the preparation of the University's sustainability report, enabling the University to assess the current status of its sustainability initiatives and achieve the goal of mutual engagement and collaboration with stakeholders.

### Stakeholder communication channels

Important Stakeholder	Significance to NPUST	Concerned Material Topic	Communication Channel	Frequency	Section Corresponding to Concerned Issues
Current students	They are the school's core audience and the recipients of its educational outcomes, becoming highly skilled, practical, and socially responsible technical and vocational talents.	G5 Teaching Environment G6 Teaching Quality and Performance G7 Student Internships and Employment S1 Campus Environment and Safety	E-learning evaluation system Student grievance Student representatives meeting Social media	2 times each semester Any time 1 time each semester Any time	<ul> <li>2-2 Campus Environment and Infrastructure</li> <li>2-3 Teaching Quality Assurance and Student Support</li> <li>2-4 Student Internships, Employment, and Career Guidance</li> <li>5-2 Internal Social Inclusion</li> </ul>
Academic and administrative staff	The central backbone of university governance and operations, responsible for teaching, research, and administrative work, laying a solid foundation for sustainability.	G4 University Reputation G5 Teaching Environment G6 Teaching Quality and Performance S1 Campus Environment and Safety	All NPUST committees University Council Meeting Faculty Evaluation Committee/University Student Advisor Meeting Academic and administrative staff grievance Labor-management meeting	At least once each semester 1 time each semester 3 times each semester Any time Once every three months	<ul> <li>2-7 Sustainability Governance Awards</li> <li>2-2 Campus Environment and Infrastructure</li> <li>2-3 Teaching Quality Assurance and Student Support</li> <li>5-2 Internal Social Inclusion</li> </ul>
Parents	Allied partners that support student growth and the University's educational mission.	G5 Teaching Environment G6 Teaching Quality and Performance G7 Student Internships and Employment S1 Campus Environment and Safety	Discussion for parents of new students Social media Phone number and emial of each unit	1 time each semester Any time Any time	<ul> <li>2-2 Campus Environment and Infrastructure</li> <li>2-3 Teaching Quality Assurance and Student Support</li> <li>2-4 Student Internships, Employment, and Career Guidance</li> <li>5-2 Internal Social Inclusion</li> </ul>
Alumni	An important pillar for building the University's sustainability brand and enhancing its image, reputation, and influence.	G4 University Reputation S1 Campus Environment and Safety S4 Industry-Academia Collaboration	Alumni service platform Alumni forum Graduate status survey	Any time 1 time each semester Any time	2-7 Sustainability Governance Awards 5-2 Internal Social Inclusion 5-3 External Social Inclusion



### **Stakeholder Engagement and Collaboration**

### **♦ Examples of Engagement Cases**

Stakeholder	Material Concerned Issue	SDGs Relevance	Stakeholder	Material Concerned Issue	SDGs Relevance
Current students	G5 Teaching Environment	3.b 4.7 9.5	Government	E2 Low-Carbon Campus	7.2 11.2 13.2 15.1 17.17



### Toufen Animal Hospital Donates Handheld Wireless Ultrasound Devices to Support Teaching

Dr. Hsu Jui-Yang, Director of Toufen Animal Hospital and a distinguished alumnus of the Department of Veterinary Medicine, donated four handheld wireless ultrasound devices in gratitude for the University's cultivation. This donation not only enhances veterinary education and clinical imaging diagnostic training but also increases diagnostic flexibility. At the same time, it symbolizes NPUST's continued development and innovation in the field of intelligent and mobile pet healthcare, injecting more professional strength into animal medical care.



### 2050 Net-Zero City Expo: Showcasing the University's Low-Carbon Campus Achievements

The University received the National Sustainable Development Award in 2023 and was invited to participate in the "2nd 2050 Net-Zero City Expo." At the Net-Zero City Vision Pavilion, the University showcased various low-carbon and sustainability practices on campus, including solar power generation, artificial wetland recycling systems, and green transportation initiatives, demonstrating its determination and capability to transform the campus into a low-carbon model.

Stakeholder

Concerned Issue

**SDGs Relevance** 

Stakeholder

Material Concerned Issue

**SDGs Relevance** 

Academic and administrative staff

**G6** Teaching Quality and Performance

4.7 9.1

Nongovernmental organizations and community members

E3 Water Management and Use

6.3 12.8 17.17



#### Focus on USR Teaching Design

The "USR Teaching Design: Who Needs to Take Action?" program aims for faculty members, in addition to imparting professional knowledge to students, to guide them through the process of participating in social service practices. This helps students develop independent thinking and problemsolving abilities while fostering positive connections with local communities, thereby fulfilling university social responsibility.



### **World Rivers Day Pledge Event**

To address livestock wastewater pollution issues in the Donggang River flowing through Kanding Township, Pingtung County, the University collaborated with public and private sectors to implement a river advocacy seed project through general education courses, aiming to improve the efficiency of livestock manure resource utilization. At the same time, the University celebrated "World Rivers Day," designated by the United Nations, to collectively show care for and protect rivers.

**Parents** 

S1 Campus **Environment and** Safety

3.4 3.6 11.2 11.7

**Business** 

S12 University Social Responsibility Practice

11.6 12.6 15.5



### Freshmen and Parent Orientation Sessions for Two-Way Communication

The University regularly organizes freshmen and parent orientation sessions to help new students and their parents understand the campus structure and administrative operations. The events also include Q&A sessions that allow direct faceto-face communication with the University and immediate responses to their questions. The sessions are held in northern, central, and southern Taiwan to make participation more accessible for parents and students across the country, ensuring effective communication. From 2022 to 2024, a total of nine sessions were held, with 2,473 participants.



### Working with PX Mart to Promote the "Owl Pineapple" Project to Protect Ecology and Agriculture

The University joined hands with PX Mart and agricultural organizations to promote the "Owl Pineapple" project. Through reduced pesticide management and the installation of perches and nest boxes, owls are guided to inhabit farmlands, replacing pesticide use with biological pest control and promoting the coexistence of agriculture and ecology. PX Mart supports eco-friendly farming practices and develops ecological agricultural products, demonstrating corporate social responsibility. This project not only improves pineapple quality but also embodies the goal of creating sustainable value through collaboration between universities and enterprises.

**Alumni** 

**G4** University Reputation

3.b 4.7 9.5 17.16

**Suppliers** 

S4 Industry-Academia Collaboration

4.4 8.5 9.4



### Distinguished Alumnus Lai Cheng-Kuang Awarded Honorary **Doctorate in Veterinary Medicine**

Lai Cheng-Kuang, founder and CEO of BioLegend Taiwan Inc., has become a source of pride for Taiwan's biotechnology industry with his outstanding achievements, including receiving the Honorary Medal from the German Society for Immunology (DGfl) and being recognized as one of The Scientist's "Top 10 Innovations of 2020." The University awarded him an "Honorary Doctorate in Veterinary Medicine" in recognition of his remarkable contributions to the field of biotechnology.



#### Donation of Training Vehicles to Jointly Cultivate Technical and Vocational Talents

Following the donation of a Zinger Pickup truck and an electric motorcycle in 2023, China Motor donated another training vehicle to NPUST in 2024 for use in teaching. internship training, and research. The two parties have maintained a long-term and close industry-academia collaboration, and many outstanding alumni are currently employed at China Motor, realizing a win-win future.

# 2.

# Sustainable University Governance and Performance (G)

- The University promotes local employment opportunities, with 86.82% of all faculty and staff members based in southern Taiwan.
- From 2022 to 2024, more than NT\$78 million in flexible salary incentives were awarded to faculty members for their contributions in research, industry—academia collaboration, teaching, and service.
- From 2022 to 2024, the number of faculty members participating in industry internships and the completion rate both reached 100%.
- In line with the government's policy to boost the birth rate, the University established the "National Pingtung University of Science and Technology Non-Profit Kindergarten for Employees' Children," the largest in Taiwan by area, featuring an outdoor play space of 785 ping (approximately 2,595 m²).
- From 2022 to 2024, more than NT\$520 million was invested in improving campus infrastructure, internship facilities, and hardware and software equipment.
- Drawing on technology from Dalum Agricultural College in Denmark, the University launched the "Tropical Livestock and Poultry Sustainable Production Talent Cultivation Base Project," which received approximately NT\$120 million in project subsidies.
- At the 2024 National Intercollegiate Athletic Games, the University won 10 gold, 2 silver, and 4 bronze medals, ranking 2nd among technological universities nationwide and 8th in total number of gold medals.
- The University has implemented STEM education and innovative teaching models, integrating
  problem-based learning (PBL) into curriculum design and providing over NT\$20 million
  annually in teaching subsidies.



- In the 2025 Times Higher Education World University Rankings, the University participated in the interdisciplinary ranking for the first time, ranking in the 251–300 range globally, 2nd among technological universities in Taiwan, and 7th nationwide.
- The student-faculty ratio has decreased year by year, reaching 19.78 in the 2023–2024 academic year, with each student receiving more than NT\$190,000 in teaching resources on average.
- Through multiple funding channels to support education, nearly 43,000 students received financial assistance between the 2021–2022 and 2023–2024 academic years, with a total amount exceeding NT\$340 million.
- The University leads all institutions nationwide in providing free meal vouchers in student cafeterias to reduce the meal burden for underprivileged students.
- From the 2021–2022 to 2023–2024 academic years, over 85% of companies expressed satisfaction with the work performance of student interns, and the willingness for long-term internship collaboration has increased annually, reaching 93%.
- From the 2021–2022 to 2023–2024 academic years, students earned more than 11,700 professional certifications, and a total of more than NT\$10.58 million was awarded in professional certification incentives and course support funding.
- From 2022 to 2024, annual industry–academia collaboration project funding exceeded NT\$1 billion, reaching nearly NT\$1.2 billion in 2024.
- From 2022 to 2024, a total of 2,907 research projects were carried out, of which 1,116 were related to sustainability topics, accounting for as much as 38%.
- Academic research results and patented technologies have been commercialized, with technology transfer and licensing revenue exceeding NT\$30 million in total over the past three years.

### 2-1 Recruitment and Retention of Outstanding Talent GRI2-7 \ 2-8 \ 401-1 \ 405-1 | SV-ED-000.D

Vision and Strategies of

NPUST conducts the recruitment of faculty, staff, and contracted personnel in accordance with relevant personnel regulations, adhering to the principles of fairness, impartiality, and transparency. The University implements a policy of "appointing based on merit and assigning positions based on suitability" to build a diverse and professional teaching and administrative team.

The University handles matters such as appointment and dismissal, salary, rewards and penalties, retirement, and insurance in accordance with central government regulations, and adjusts the basic wage as required to safeguard the rights and interests of all personnel. At the same time, the University actively promotes a friendly workplace and harmonious labor relations. In 2024, 44 persons with disabilities were employed, accounting for 3.89% of total employees, meeting the statutory requirement.

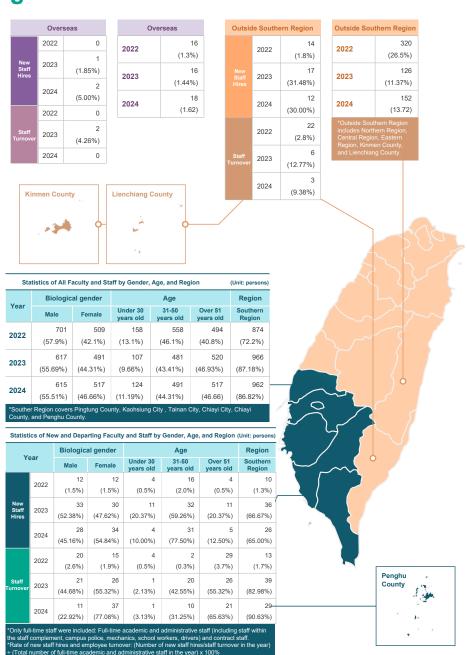
NPUST is a "Hope Campus" for local employment. In 2024, 86.82% of all faculty and staff members were registered residents of southern Taiwan, further strengthening local employment and regional engagement.

### **Human Capital Overview**

Human Resources Table	Unit: persons

		Full-tim	ne Staff						
Year	Academic Staff	Full-time Administrative Staff	Contract Staff	Total	Part-time faculty	Fixed-term employees	Temporary Workers	Total	Total
2022	447 (36.9%)	158 (13.1%)	179 (14.8%)	784 (64.8%)	228 (18.8%)	4 (0.3%)	194 (16.1%)		1,210
2023	446 (40.25%)	146 (13.18)	179 (16.16%)	771 (69.58%)	169 (15.25%)	0	168 (15.16%)	337 (30.42%)	1,108
2024	447 (39.49%)	146 (12.9%)	188 (16.61%)	781 (68.99%)	168 (14.84%)	3 (0.27%)	180 (15.9%)		1,132

<sup>\*</sup> Source: October 2024 data reported to the Database of Higher Technological and Vocational Education



<sup>\*</sup> Full-time faculty includes faculty members within the staffing quota, project-based faculty, researchers, teaching assistants under the former system, and military instructors. Staff members include civil servants and campus security personnel.

### 2024 NPUST Sustainability Report

### Improving the Remuneration System and Flexible Salary Incentives GRI2-19~2-21

The salaries of full-time faculty members and researchers at the University are paid in accordance with the "Salary Scale for Faculty Members at Public Universities and Colleges," and comply with the Ministry of Education's regulations on the remuneration of professors, associate professors, assistant professors, and lecturers. The salaries of staff members and contracted employees are handled in accordance with the "Guidelines for Compensation of National Military, Civil Service, and Educational Personnel" and the "Compensation Standards for Contracted Employees." The ratio of the highest individual annual total remuneration to the median annual total remuneration of other employees ranges from 1 to 3. All faculty and staff salaries are adjusted based on the government's salary adjustment standards for public sector employees.

<b>Total Remuneration</b>	Ratio	in the	<b>Past</b>
Three `	Years		

	Tillee Tears								
Perso	nnel Categories	2022	2023	2024					
Full- Time Staff	Academic Staff	2.717	2.120	2.165					
	Administrative Staff	1.820	1.744	2.092					
	Administrative Assistants	1.184	1.223	1.272					

<sup>\*</sup> Included full-time staff only.

To attract, nurture, and retain talent, strengthen the quality of faculty, and enhance overall teaching quality and academic competitiveness, the University has established the "Principles for Payments Beyond Base Salary (Seniority Pay). Additional Allowances, and Personnel Expenses for Non-Regular Staff and Administrative Compensation," the "Guidelines for Reward Payments for Outstanding Faculty with Functional Assignments," and the "Guidelines for Chair Professor Honoraria," in accordance with the Ministry of Education's "Guidelines for Flexible Salary Implementation for Exceptional Talent at Universities and Colleges," the "Revised Flexible Salary Scheme for Attracting and Retaining Exceptional Talent." and the "Regulations on Faculty Professional Development, Advanced Studies, and Research." Flexible salary incentives are provided to reward faculty members for their contributions in research, industry-academia

collaboration, teaching, and service, ensuring that outstanding faculty receive substantial financial rewards. In recent years, the University has also allocated incentives and subsidies for faculty research and development on sustainability-related topics, including healthcare, food safety, food and agricultural education, emerging energy development, circular economy, sustainable environment, biodiversity conservation, climate change adaptation, and disaster prevention and mitigation. Funding sources include budgets allocated by the Ministry of Education, the Higher Education SPROUT Project, National Science and Technology Council subsidies, and the University's self-generated revenue from its University Fund. Over the past three years, more than NT\$78 million in flexible salary incentives have been awarded.

In addition, to reward outstanding staff, the University conducts selection and incentive programs for exemplary staff, administrative assistants, and maintenance workers in accordance with the "Guidelines for Selection and Reward of Outstanding Staff" and the "Guidelines for Reward of Outstanding Maintenance Workers." These programs aim to boost work enthusiasm and improve service quality. Each year, more than NT\$130,000 in incentive funds are allocated for these rewards.

### Statistics of Faculty Receiving Flexible Salary and Academic Awards

	2022			2023			2024			
Year/Item	Persons		Amount	Persons		Amount	Persons		Amount	
	Male Female		(NT\$)	Male	Female	(NT\$)	Male	Female	(NT\$)	
NSTC Outstanding Talent Awards	41	9	5,024,640	32	5	4,560,000	33	7	4,224,000	
Industry–Academia Collaboration Performance and Research Awards	50	12	5,573,236	79	21	3,419,963	89	26	3,378,844	
Distinguished Contribution Special Professorship Awards	6	0	1,440,000	6	0	1,080,000	4	0	960,000	
Academic Journal Publication Awards	91	31	2,497,941	97	23	2,497,941	64	39	2,998,341	
		Outst	anding Teach	ing Fac	ulty					
Category A: Professional Outstanding Teaching Faculty	6	4	1,224,000	7	3	1,176,000	7	2	1,152,000	
Category B: Excellent Innovative Teaching Faculty	9	5	1,320,000	2	2	330,000	5	4	1,152,000	
Category C: Faculty Promoting University Social Responsibility Teaching	9	5	570,000	7	1	360,000	11	4	570,000	
Category D: Faculty Promoting Higher Education SPROUT Program Teaching	97	42	2,656,866	36	8	367,200	85	39	1,770,911	
Outstanding Advisors	5	3	960,000	7	3	1,176,000	7	2	1,152,000	
Outstanding Faculty with Functional Assignments	486	193	7,972,836	511	201	81,45,667	476	202	8,096,652	
Total	800	304	29,239,519	784	267	23,112,771	781	325	25,454,748	

<sup>\*</sup> 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)

Unit: persons

### Establishing Clear Promotion Pathways and In-Service Development GRI404-1

The University handles faculty promotions in accordance with the "Regulations on the Appointment and Promotion Review of Full-Time Faculty" and the "Regulations on the Appointment and Promotion of Non-Regular Full-Time Teaching Staff." Additionally, a diversified promotion system has been established to guide faculty in professional specialization and to develop comprehensive career advancement pathways. Promotion eligibility is determined through internal preliminary and secondary reviews, external peer reviews, and final internal evaluations of professional achievements, teaching performance, research output, service, and counseling performance. Furthermore, in accordance with the "Civil Service Promotion Act," its "Enforcement Rules," and the "Scoring Standards for Promotion of Civil Servants in the Executive Yuan and Subordinate Government Agencies and Public Schools," the University has formulated the "Guidelines for Staff Promotion Review Procedures." These guidelines ensure a balance between internal promotion and external recruitment and adopt open, fair, and impartial processes to promote and reassign outstanding staff members based on merit and development potential.

Statistics of Faculty Promotions							Unit: persons	
	Academic year		promoted to professors	promoted t	professors o associate ssors	Associate professors promoted to professors		
		Male	Female	Male	Female	Male	Female	
	2021	2	0	3	0	7	1	
	2022	1	0	8	1	16	0	
	2023	2	0	2	3	6	5	

			Omic porcono				
Academic year	Administr	ative Staff		strative stants	School Workers		
	Male	Female	Male	Female	Male	Female	
2021	1	0	3	10	0	0	
2022	2	3	0	0	2	0	
2023	5	3	0	0	0	0	

**Statistics of Staff Promotions** 

To continuously improve teaching quality and academic performance, faculty members who have served at the University for three academic years are required to undergo evaluations in "Teaching," "Research (including industry-academia collaboration)," and "Service and Counseling," which serve as references for decisions on contract renewal, promotion, and further studies. In accordance with Article 26 of the Technical and Vocational Education Act, the University was required to have 12 faculty members complete industry internships over the past three years, with a completion rate of 100%. In addition, to strengthen administrative performance and enhance professional knowledge, each staff member is required to complete at least 20 hours of training per year.

Statistics of Faculty Development and Training Activities
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Academic year		N	umber of I	Hours	Numb	er of Parti	cinants	
	Number of Activities			<b>Total Number</b>	rumber of runticipants			
		Physical	ysical Virtual	of Hours (Physical + Virtual)	Male	Female	Subtotal	
2021	133	137.5	160	297.5	2,458	2,422	4,880	
2022	99	190.5	102	292.5	1,573	1,886	3,459	
2023	107	169	70	239	2,103	2,844	4,947	

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

### **Statistics of Staff Training**

	Number of Hours				Number of Participants/Average Hours of				
Academic			Total	Training					
year	Physical	Virtual	Number of Hours (Physical + Virtual)	Male	Average training hours	Female	Average training hours		
2021	3,048	5,126	8,174	1,534	55	1,839	62		
2022	4,252.5	3,997.5	8,250	908	39	2,066	53		
2023	5,657	3,290	8,947	515	38	2,767	57		

### Number of Faculty Participating in Industry Internships and **Completion Rate in the Past Three Years**

**Unit: persons** 

Year	Faculty Participating in Industry Internships					
	Required Participants	Completed Participants	Completion Rate			
2022	6	6	100%			
2023	4	4	100%			
2024	2	2	100%			

### 2024 NPUST Sustainability Report

### **Employee Insurance and Protection of Rights and Interests** GRI401-2 \ 401-3

The University provides insurance coverage for all full-time faculty and staff members (excluding part-time personnel) in accordance with the "Civil Servants Insurance Act" and the "Labor Insurance Act," and they are entitled to receive pension benefits based on their years of service upon retirement. Additionally, employees may apply for unpaid leave for childcare, parental care, further education, or other reasons in accordance with the "Gender Equality in Employment Act," the "Regulations on Unpaid Leave for Civil Servants," the "Regulations on Unpaid Leave for Educational Personnel," and the "Regulations for Implementing Unpaid Parental Leave for Raising Children." After the approved leave period expires or the reason for unpaid leave ceases to exist, employees may apply for reinstatement and resume receiving their salary. 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 Full-Time Employees Taking Unpaid Parental Leave

Unit: persons

	Biological gender	2022	2023	2024
Number of employees that were	Male	10	11	10
entitled to parental leave	Female	18	14	17
Total number of employees that	Male	1	0	1
took parental leave	Female	8	3	3
Staff due to return to work after	Male	1	0	0
taking parental leave (A)	Female	2	2	1
Staff who did return to work after	Male	1	0	0
parental leave	Female	2	2	1
Employees retained 12 months	Male	_*	0	-*
after returning to work following a period of parental leave (C)	Female	_*	2	_*
Detrine to week rete (D/A)	Male	100%	100%	100%
Return to work rate (B/A)	Female	100%	100%	100%
Potention rate (C/P)	Male	-	-	-
Retention rate (C/B)	Female	-	-	-

<sup>\*</sup> Returning to work for less than 12 months in that year.

Since 2023, the University has provided maternal health care gifts for full-time employees who are pregnant, giving birth, or breastfeeding, and increased the reward amount in the following year to encourage female employees to actively participate in maternal health protection programs. During the maternal health protection period, in addition to conducting individual health and workplace risk assessments and improvements, the University also continues to provide care and follow-up for high-risk groups to reduce maternal health risks.

In addition, in response to the government's policy of increasing the birth rate, the University established the "National Pingtung University of Science and Technology Non-Profit Kindergarten for Employees' Children," which features an outdoor play area of 785 ping (approximately 2,595 m²), to help the children of faculty and staff, as well as those from nearby communities, enroll in a kindergarten close to home. It also provides opportunities for faculty academic research and student internships in related departments.

In 2022, the University signed an agreement with the National Experimental High School at Pingtung Science Park. Children of the University's faculty and staff are designated as "Science Park Students," and are given priority admission to the kindergarten, elementary school, junior high school, and senior high school within the Science Park.



Children enrolled in the non-profit kindergarten for employees' children



Strategic alliance memorandum signed with National Experimental High School at Pingtung Science Park





### 2024 NPUST Sustainability Report

### 2-2 Campus Environment and Infrastructure 4.7 9.1 | G102 | Material Issue G5

Campus buildings focus on maximizing the capacity and functionality of educational spaces. During construction and maintenance, building design places emphasis on architectural appearance, safety, public art, accessibility, green environment planning, and community development. At the same time, educational philosophy and curriculum practicality are taken into account in campus planning. Campus renovation and construction are gradually promoted to create an interactive, diverse, and engaging creative learning space.

NPUST aims to "find a future for students and connect talents with employment," keeping pace with industrial upgrading to create an educational system that integrates learning with application and achieves a win-win situation between academia and industry. The University cultivates technical and vocational talents with interdisciplinary skills aligned with the context of global industrial development. Therefore, campus facility construction and renovation budgets are allocated annually. Over the past three years, more than NT\$520 million has been invested to improve the school's infrastructure, hardware and software facilities, optimize teaching equipment and internship fields, and establish talent training bases aligned with key national innovation industries.

### **Statistics of Campus Infrastructure Maintenance and Renovation**

Unit: NT\$

Year	Power supply improvement	Road condition improvement	Smart energy conservation	Renovation and waterproofing improvement of restrooms	Maintenance of buildings and sports facilities	New building construction projects
2022	21,789,839	8,982,500	7,660,000	19,638,070	55,961,079	0
2023	3,487,735	2,474,537	10,244,813	4,247,538	154,523,138	0
2024	1,446,723	4,336,107	2,163,000	7,898,491	67,866,021	151,988,760
Total	26,724,297	15,793,144	20,067,813	31,784,099	278,350,238	151,988,760

### Major new building construction projects

#### **Smart Agriculture Center**

### **Veterinary Teaching Hospital – Downtown Campus**

### Department of Wood Science and Design Innovation Building (under construction)



The University integrates research, teaching, and administrative resources and operates a 10-hectare farm as a technical R&D field to cultivate agricultural production and management talents and promote innovation in agricultural technology. At the same time, it promotes education extension services to the community, fostering shared prosperity between industries and local regions.



The veterinary teaching hospital focuses on companion animal diagnosis, treatment, and education, enhancing veterinary professional skills. By introducing advanced medical equipment, the hospital improves diagnostic standards, promotes industry—academia collaboration, and provides a high-quality learning and employment environment, thereby enhancing the competitiveness and influence of the College of Veterinary Medicine.

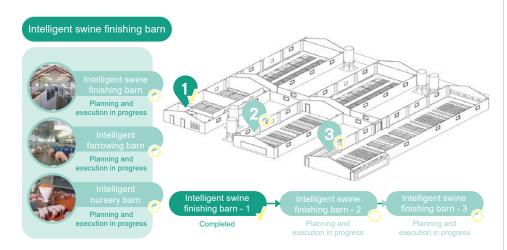


The innovation building for the Department of Wood Science and Design aims to build a world-class woodcraft talent cultivation base, strengthening research in wood science, product design, and smart manufacturing technologies. By integrating industry-academia resources, the University enhances woodworking technology and design competitiveness, providing strong support for domestic and international skills competitions and industrial development.

# **Construction of Practical Industry-Like Training Environments**

#### Tropical Livestock and Poultry Sustainable Production Talent Cultivation Base Project

# Agricultural Tractor Safety Operation Training Field





To cultivate skilled talents in smart livestock farming, the University is promoting the "Tropical Livestock and Poultry Sustainable Production Talent Cultivation Base Project," focusing on three major livestock categories: dairy cattle, pigs, and laying hens. Five smart animal welfare barns have been established, incorporating automated management and data analysis technologies to build a demonstration field that balances animal welfare and production efficiency. Curriculum design integrates three major components: "Precision Livestock Nutrition," "Digital Management of Smart Barn Data," and "Lean Feeding Management." Three types of specialized programs are offered for university students, vocational high school students, and industry professionals, combined with on-site training to strengthen practical skills.

The project draws on the experience of Dalum Agricultural College in Denmark, established "Tropical Pig Farming Technology Consultation and Training Center" and has received approximately NT\$120 million in subsidies. It has developed a series of technical consultation and talent training courses on pig barn design, pig breeding, nutrition, disease prevention, meat utilization, and cold-chain systems, and has upgraded smart pig barns.

To address agricultural labor shortages and the widespread use of large machinery, the Department of Biomechanical Engineering has established a "Tractor Training Field," which has officially begun operation as the first professional training base in Taiwan commissioned by the Agriculture and Food Agency of the Ministry of Agriculture. The training site integrates resources from the Agricultural Machinery Training Center and provides practical training and demonstrations in tractor driving techniques and safety operations through simulation exercises, including tasks such as reverse parking, turning in narrow spaces, and traffic light navigation, enhancing operators' practical skills and safety awareness.

In recent years, agricultural machinery accidents have frequently occurred, particularly involving large tractors, often caused by blind spots or improper operation. To reduce risks, the training site is taught by instructors with practical experience and showcases various tractor models and their attachments, providing hands-on training opportunities for participants. In the future, the training site will align with the Agriculture and Food Agency's agricultural machinery safety education policies and collaborate with industry resources to offer specialized training programs and skill certification, enhancing industry capabilities. The establishment of the training field not only shortens the technology gap between academia and industry but also sets a new standard for safe agricultural machinery operation, strengthens the foundation for sustainable agricultural development, and achieves a win-win outcome for industry and farmers.



# **Enhancing Foreign Language Facilities and Resources**

The University's Language Center includes divisions for foreign language instruction, language testing and equipment, and Chinese language education. It designs English and foreign language curricula for the entire university and houses seven language classrooms (including language testing rooms, multilingual classrooms, and professional foreign language classrooms) and two foreign language self-learning areas. These facilities are used for English and second-language courses and are also periodically designated as venues for language proficiency tests. Over the past three academic years, more than 15,000 students have participated in language training programs. The University has also acquired digital test preparation databases for TOEIC, GEPT, IELTS, and TOEFL (iBT) to support students' afterclass practice. The University is promoting the "Five-Dimensional Foreign Language Transformation Project," which includes technologization, contextualization, specialization, diversification, and professionalization of language learning, providing a diverse language learning environment and interactive classrooms.







# ◆ Participation in Language Training Courses and Activities

Catagony	Longuego Training Courses / Activities	Academic year			
Category	Language Training Courses / Activities	2021	2022	2023	
Exams and Career Preparation	Language proficiency classes, English résumé writing workshops	464	408	545	
Language Learning	English, Japanese, Spanish, French, Thai, Vietnamese, German, Korean, Malay	4,032	4,240	4,070	
Language Learning Support	English/Japanese writing consultation centers, rapid language exchange programs	-	156	156	
Cultural Experience and Exchange	"World GO $\times$ Cultural Exploration" camp, "NPUST International Outdoor Film Festival," and more	60	148	827	

# **Sports and Athletic Facilities**

To meet the needs and expectations of faculty and students for a safe sports environment, the University has optimized sports venues and improved sports facility equipment, encouraging faculty and students to participate in activities at the National Sports Center, cultivating exercise habits and a culture of fitness. By leveraging the resources and unique features of each sports facility, the University actively promotes the development of various athletic programs on campus. In the 2024 National Intercollegiate Athletic Games, the University achieved impressive results with 10 gold, 2 silver, and 4 bronze medals, ranking 8th nationwide in gold medals and 2nd among universities of science and technology in overall performance. In addition, all sports and athletic facilities on campus are available for use by external visitors, high schools and vocational schools, and other groups, achieving the goal of community co-prosperity and sports equity.

#### 2023 ASICS Relay



The ASICS Relay, known for combining sustainability with ecological features, is held on the NPUST campus. Runners not only enjoy the scenery comparable to a national park but also engage in outdoor exploration and ecological tours.

# 2024 Olympic Experience Camp for Youth and Sports Professionals



#### **Water Sports Competition**



The University has actively promoted sports activities and facility enhancements, investing NT\$6 million to renovate the swimming pool and provide a safe and comfortable exercise environment. This year, the Water Sports Competition was held once again, attracting more than 300 faculty and student participants, showcasing health and vitality.

#### **NPUST Anniversary Campus Run**



Number of Students

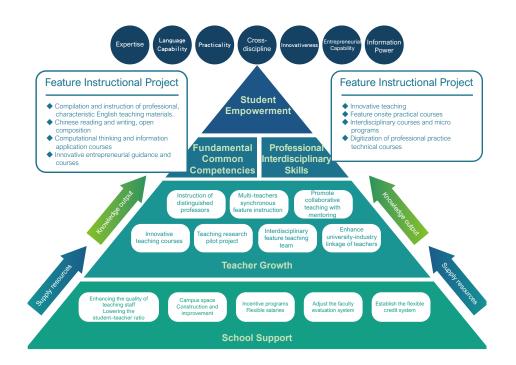
2022

# 2-3 Teaching Quality Assurance and Student Support 4.3 4.7 | G103 | Material Topic G6

# **University Evaluation and Innovative Teaching Programs**

The University implements STEM education and innovative teaching models, integrating Problem-Based Learning (PBL) course design to improve teaching quality and student learning outcomes. Additionally, the UCAN competency-based teaching quality assurance system has been introduced, and cross-disciplinary innovative teaching projects have been integrated. More than NT\$20 million in course teaching subsidies are provided each year.

To promote innovative teaching, from 2022 to 2024, the University offered 318 courses with a total of 11,028 students enrolled — a significant increase compared with 2018 (a 7-fold increase in courses and a 4.5-fold increase in students). Random surveys show that students rated course content 4.53 out of 5, significantly improving learning effectiveness and classroom atmosphere.



#### **♦ Number of Courses**

2022



From 2022 to 2024, NPUST participated in the international evaluation by Quacquarelli Symonds (QS) and received 5-star (Excellence) ratings in six categories: teaching, infrastructure, innovation, employability, academic development, and inclusiveness. In addition, in the 2025 Times Higher Education World University Rankings, the University participated in the interdisciplinary ranking for the first time and ranked 251–300 globally, 2nd among universities of science and technology in Taiwan, and 7th nationwide.

2024

Furthermore, for the 2019–2023 academic years, the University's self-evaluations for institutional governance were submitted and approved by review committees. All teaching unit self-evaluations passed, including 18 teaching units accredited by the Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT): College of Agriculture (10 departments and programs), International College (1 department, 3 international programs), College of Veterinary Medicine (3 departments and programs), and College of Management (1 department). In addition, 17 teaching units received professional accreditation from the Institute of Engineering Education Taiwan (IEET), including EAC-accredited units, College of Engineering (7 units), GTAC-accredited units, College of Humanities (6 units), and 4 units in the College of Agriculture and International College. The College of Management (9 units) also obtained accreditation from the Association to Advance Collegiate Schools of Business (AACSB).

#### ♦ QS STARS International Evaluation: 5 Stars in 6 Categories





# **Expanding Faculty and Improving Teaching Effectiveness**

The University continues to build a professional, high-quality teaching and research environment to achieve its talent cultivation goals and strengthen institutional development, benefiting students. By the 2023 academic year, the student-to-faculty ratio had decreased to 19.78, with over NT\$190,000 in teaching resources available per student on average. To further enhance teaching capacity, the University has in recent years hired additional full-time faculty outside the staffing quota (including project faculty and research staff funded by the university's endowment fund). The University also has a system for transitioning faculty from non-staff to staff positions. Non-staff full-time faculty members with outstanding performance are given priority for conversion to staff positions in accordance with Article 6-1 of the Regulations on the Appointment and Promotion of Full-Time Faculty. Applicants currently or formerly employed as project faculty and rated as "excellent" by the same hiring unit for two consecutive academic years will be directly nominated by the departmental faculty review committee for initial review and ranking, then submitted for college-level secondary review, and finally approved by the University Faculty Evaluation Committee.

#### **Average Teaching Resources Per Student**

Item/Year	2021	2022	2023	
Teaching Investment (NT\$)	1,968,864,216	1,995,736,292	1,967,847,933	
Number of Students	10,720	10,620	10,309	
Average Resources Per Student (NT\$)	183,663	187,992	190,886	



# Expansion of Industry Expert Co-Teaching

The participation of industry professionals in courses enriches students' learning resources, enhances their practical professional knowledge and skills, and helps them understand current industry conditions. Through first-hand sharing by practitioners, students can also acquire essential workplace competencies. The University has established the "Guidelines for Recruiting Industry Experts for Co-Teaching." These courses focus on professional and practical subjects offered by academic units based on their characteristics and industrial development needs. This initiative helps faculty enhance course content to better reflect industry realities, increases internship opportunities for students, and provides teachers with more chances for industry–academia collaboration and research training in the industrial field. During the 2021–2023 academic years, a total of 2,278 industry experts participated in coteaching, assisting with 1,970 courses — a significant increase compared with 1,875 experts and 1,528 courses in the 2018–2020 academic years.

#### **Effectiveness of Industry Co-Teaching**

Academic year	Industry Co- Teaching Courses	Number of Industry Experts Participating in Co-Teaching Research Projects		Specialized Professional On- Site Practical Courses
110	623	734	9	6
111	759	885	20	7
112	588	659	13	7

# **Enhancing the Public Nature of Higher Education**

The University utilizes government subsidies, such as those from the Ministry of Education's Higher Education Sprout Project, to improve support systems for economically and culturally disadvantaged students. It also actively solicits donations from corporations, alumni, and the public to provide diverse financial assistance covering admission, coursework, certification, and career planning. In addition to offering multiple admission channels and preferential treatment for economically disadvantaged students, the University has also improved its student aid measures to assist students from low- and middle-income households, children or grandchildren of families facing special circumstances, persons with disabilities and their children, Indigenous students, and those receiving subsidies for disadvantaged students in tertiary institutions, as well as students whose families have suddenly fallen into financial hardship. Support measures include financial assistance for examinations and test-taking support to enhance students' willingness and ability to take entrance exams and enroll. After enrollment, the University provides counseling and relevant financial aid to ensure a secure learning environment.

**Unit: NT\$** 

# Preferential Admission Application Fee

The University has expanded its financial support measures to include guaranteed admission opportunities. Across undergraduate, master's, and doctoral admission channels, application fees are waived for applicants from low-income households, while applicants from middleincome households receive a 60% discount on application fees. From 2021 to 2023 academic years, over 1,000 students received such support, totaling NT\$617,380.

Financial Assistance Plans for Economically Disadvantaged Students by Admission Channel							
 2021-2022 academic	2022-2023 academic	202					

by Admission Channel							
Examination/Number of Students and Amount of	2021-2022 academic year		2022-2023 academic year		2023–2024 academic year		
Funding	Persons	Total Amount	Persons	Total Amount	Persons	Total Amount	
Registration Fee for School Transfer Examination	32	16,080	36	15,600	33	15,480	
Registration Fee for Stage 2 Selection Test of Four- Year Technical Programs	237	95,700	235	148,350	263	174,450	
Registration Fee for Stage 2 Admission Test of Four- Year Technical Programs	15	10,520	7	5,080	5	3,600	
Application Fee for Special Admissions	13	5,500	8	3,400	13	4,900	
Application Fee for Sports Talent Admissions	11	7,400	13	9,400	5	4,200	
Registration Fee for Selection Test of Master's Programs	15	14,640	22	20,640	25	25,200	
Application Fee for Master's Program General Admissions	10	11,200	9	9,800	16	16,240	
Total	333	161,040	330	212,270	360	244,070	

<sup>\*</sup> 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.

#### Preferential Measures to Guarantee Admission

Recognizing that economically or culturally disadvantaged students have relatively fewer extracurricular learning resources, the University offers guaranteed admission quotas for students with disabilities, Indigenous students, and students from middle-income households, as well as additional admission points for children of new immigrants, in accordance with the admissions guidelines. These preferential measures — including priority admission or bonus points — are designed to improve their chances of admission.

#### Statistics on Economically or Culturally Disadvantaged Students Admitted to Daytime **Bachelor's Programs by Admission Channel**

Bactielor's Programs by Admission Chaimer									
Academic year	Admission Channel	Number of Admitted Students (A)	Number of Admitted Disadvantaged Students (B)	Percentage of Disadvantaged Students (C) = (B) / (A)					
	Recommendation Admissions	901	89	9.88%					
	Special Admissions	118	11	9.32%					
	Key Sports Programs	74	11	14.86%					
2021	Individual Applications	138	2	1.45%					
	Examination Assignments	744	47	6.32%					
	Examinations for Students with Disabilities	21	21	100%					
	Recommendation Admissions	862	72	8.35%					
	Special Admissions	72	7	9.72%					
	Key Sports Programs	74	6	8.11%					
2022	Individual Applications	141	3	2.13%					
	Examination Assignments	771	61	7.91%					
	Examinations for Students with Disabilities	17	17	100%					
	Recommendation Admissions	724	63	7.32%					
	Special Admissions	70	13	18.57%					
	Key Sports Programs	46	4	8.70%					
2023	Individual Applications	135	3	2.22%					
	Examination Assignments	857	62	7.23%					
	Examinations for Students with Disabilities	17	17	100%					

**Unit: NT\$** 

# Multi-Channel Financial Support for Education

The University supports economically or culturally disadvantaged students through multiple financial channels, including tuition and fee subsidies, accommodation discounts, financial aid for students from underprivileged backgrounds, and various scholarships and grants. Each year, the University allocates 8% of its total tuition revenue — after deducting tuition waivers as student scholarships and grants, significantly exceeding the Ministry of Education's requirement of 3%. These funds are used to provide tuition and fee waivers for low-income students, Indigenous students, and students with disabilities. From 2021 to 2023, the University's institutional fund subsidized 34.640 students with a total of more than NT\$278,945,000 in scholarships and grants. Government subsidies supported 6,624 students with more than NT\$41,380,000, while donations from various sources supported over 1,500 students with more than NT\$20,870,000 in scholarships.

#### Sources of Scholarship and Grant Funding

Fund Source	Funding Item	2021-2022 academic year		2022-2023 academic year		2023–2024 academic year	
		Persons	Amount	Persons	Amount	Persons	Amount
Self-Raised	Tuition and Fees Funding	2,104	38,278,372	2,077	38,095,480	2,012	37,232,152
Funds	Grants	5,098	38,674,158	5,036	38,342,914	4,404	31,396,896
	Scholarships	4,850	18,807,600	4,870	20,541,966	4,189	17,576,082
Government Subsidization	Grants	2,823	17,446,780	2,000	12,733,006	1,801	11,204,344
External Donations	Exclusive Scholarship	449	6,058,799	522	6,895,060	535	7,920,614

<sup>\*</sup> Scholarships and Grants for Disadvantaged Students have been subsidized by the Ministry of Education starting from the 2023–2024 academic year.

#### Meal Vouchers

To reduce the financial burden of meals for disadvantaged students, NPUST is committed to ensuring that no student on campus goes hungry. Each semester, students from lowincome households, middle-tolow-income households, or those facing emergency situations or special circumstances may apply for meal vouchers (NT\$50 each) sponsored by campus dining service providers and the alumni association. On average, each eligible student can receive



between 20 and 40 vouchers per semester, allowing them to enjoy affordable and nutritious meals.

Academic year	Donation amount (NT\$)	Number of recipients (person-times)
2021	55,000	49
2022	85,000	68
2023	80,000	46

# Diverse Competence Learning

The University organizes Study Support Groups, tutoring sessions, provides teaching assistants, and offers various talent cultivation programs under the Higher Education Sprout Project. These programs prioritize participation by outstanding students from economically and culturally disadvantaged backgrounds to enhance their employability and employment rates. Since the launch of the Study Support Group in the 2018–2019 academic year, more than 60% of departments have participated. During the 2021–2023 academic years, a total of 1,188 students participated, effectively narrowing the learning gap for economically or culturally disadvantaged students.

Academic year	College of Agriculture	College of Engineering	College of Management	College of Humanities and Social Sciences	College of Veterinary Medicine	International College	College of Professionals	Number of Applicants
2021	108	96	116	81	3	-	-	404
2022	82	84	99	127	9	1	0	402
2023	73	83	106	102	15	0	3	382

<sup>\*</sup> Because most financial aid and subsidies for economically and culturally disadvantaged students are limited to domestic students, participation by students from the International College remains relatively low.

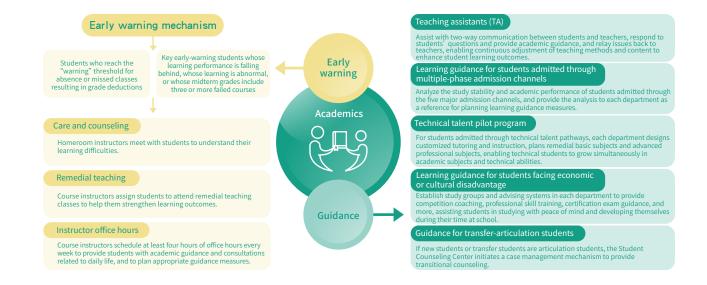
<sup>\*</sup> Free accommodation for students from low-income households has been subsidized by the Ministry of the Interior starting from the second semester of the 2023-2024 academic year.

# 2024 NPUST Sustainability Report

# Learning Alert System

For students with poor academic performance, the University implements early alert, counseling, and follow-up measures to provide timely support and remediation at different stages of their learning process. This includes diagnosing the causes of learning failure and correcting learning mistakes. From 2021 to 2023, more than 93% of students with poor academic performance showed improvement after receiving counseling, effectively reducing the dropout rate.

Analysis shows that the academic performance of students receiving alerts and counseling significantly improved compared to those who did not receive such support. This demonstrates that the University's academic support and counseling mechanisms effectively enhance students' overall academic performance and reduce dropout rates. Additionally, students receiving counseling can access scholarships or subsidies, which further increases their motivation for continued study and their willingness to pursue graduate education.



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

Academic year	Number of students (undergraduate programs) (A)	Number of students receiving alerts (B)	Number of students receiving counseling after alerts (C)	Percentage of students receiving counseling (C/B)%	Number of students showing improved academic performance after counseling (D)	Improvement rate (D/B)%	Number of students who withdrew (E)	Withdrawal rate (E/A)%	Number of students who took a leave of absence (F)	Leave of absence rate (F/ A)%
2021	7,626	2,916	2,852	97.81%	2,780	95.34%	112	1.47%	137	1.8%
2022	7,611	3,685	3,575	97.01%	3,498	94.93%	134	1.76%	169	2.22%
2023	7,544	3,749	3,653	97.44%	3,515	93.76%	126	1.67%	248	3.29%

#### ■ "Love Without Barriers" — Guidance for Students with Disabilities

Considering the unique nature of counseling and intervention for students with disabilities, the University established a Resource Classroom, which provides individualized support service plans for students starting from the time they enroll. During the 2021–2023 academic years, there were nearly 500 instances of academic tutoring sessions for students with disabilities, totaling 1,100 teaching hours. In addition, services such as individual counseling, assistant personnel matching, assistive device resource linkage, and learning workshops were provided to a total of 11,000 person-times, helping students complete their studies with peace of mind.



#### Statistics of Academic Tutoring for Students with Disabilities

Academic year	Number of students	Number of tutoring sessions	Total teaching hours (hours)
2021	18	38	344
2022	26	229	416
2023	28	227	331

Statistics of Guidance Services for Stud Disabilities	lents with	Unit	person- times
Service Measures	110	111	112
Individual Interview	973	2,336	2,777
Application for assistant personnel services for students with disabilities	33	38	31
Assistant Matching	1,245	1,246	1,274
Academic Guidance	199	229	256
Employment of teachers and professionals for academic tutoring	18	24	21
Provision of assistive device resources	6	6	6
Graduation transition counseling lectures and career guidance activities	22	24	26
Diverse learning workshops	119	120	99
Growth groups	88	65	112

# Mental Health Counseling and Guidance

In light of the growing "world-weary generation" phenomenon, the younger onset of depression, and low treatment-seeking rates, NPUST has established a Student Counseling Center with a professional counseling team consisting of 14 full-time and part-time counselors. The team provides individual counseling and guidance, group counseling and guidance, class counseling, mental health assessments for new students, psychological counseling for students involved in gender equality incidents, mental health promotion workshops, and faculty advisor meetings and training sessions. The University continues to promote mental health support programs, including encouraging students to seek help proactively, become familiar with and utilize counseling services, and strengthening medical referrals for high-risk cases.

Profession	Professional Counseling Team and Guidance Statistics				
	Item / Academic Year			112	
Level 1 Preventive Developmental Guidance	Mental health adaptation tests and primary prevention promotion	5,881	10,750	6,012	
Level 2 Preventive Intervention Counseling	Workshops and class counseling	1,253	1,560	1,569	
Three Levels of Guidance and Counseling	Individual interviews, referral services, supportive counseling, case discussions, and psychological counseling for students involved in gender equality incidents	2,864	3,696	3,659	

# Guidance for Indigenous Students

The University has established the Indigenous Student Resource Center, which provides a single-window service to assist indigenous students with academic support, student affairs resource integration, and connection to their home communities. In the 2024-2025 academic year, there were 222 indigenous students enrolled at the University, representing 12 different tribes. The Center uses online platforms and communication tools to promptly deliver information and organizes seminars to provide students with life guidance. During the 2021–2023 academic years, more than 4,100 person-times of students participated in academic, life, and career counseling, and the withdrawal rate of indigenous students decreased from 1.19% in 2021-2022 to 0.96% in 2023-2024, demonstrating the effectiveness of the counseling services.

#### **Statistics of Indigenous Student Counseling**

#### **Unit: person-times**

ltem	Activity Type	Academic year			
item	Activity Type	110	111	112	
Academic Guidance	English Seminar and Academic Guidance	67	54	0	
Daily Life Guidance	Student life care counseling, orientation and end-of-semester seminars	355	547	512	
Career Guidance	mployment counseling lectures Certification preparation classes	257	144	231	
Development of Multiculturalism	Culinary arts activities, handicraft workshops, wilderness survival camps, tribal cultural tours, indigenous language and song teaching, "National Indigenous Education" series of activities, and "Tribal Culture Night"	461	662	817	
Total	Total				

# 2-4 Student Internships, Employment, and Career Guidance 4.4 8.5 | G104 | Material Topic G7 | SV-ED-260a.1~.3

In order to cultivate students' practical and applicable abilities and help them connect with the workplace as early as possible, NPUST arranges internships in enterprises or organizations related to their departments and fields after students have completed a certain number of professional courses. This not only enhances their adaptability and competitiveness in the job market as new graduates but also helps them gain a head start and increase their chances of being offered employment immediately after graduation. During the 2021-2023 academic years, a total of 32 sessions of Competency Enhancement Workshops were held, with 850 participants; 59 sessions of Marketing and Design Workshops, with 1,361 participants; 61 sessions of Job Description Seminars, with 2,561 participants; and 37 sessions of Resume Writing and Interview Skills Lectures, with 1,495 participants.

# **Expanding Domestic and Overseas Internship Opportunities**

To strengthen students' practical skills and technical training across all colleges. NPUST has established 29 internship sites covering an area of 120 hectares and actively collaborates with enterprises to promote off-campus internship training. During the 2021-2023 academic years, the University collaborated with nearly 2,300 domestic and overseas companies, providing more than 4,500 internship opportunities for students. In addition, over the past three academic years, companies' satisfaction rate with student internship performance has consistently remained above 85%, while the willingness of companies to engage in long-term internship collaborations has increased annually to 93%.

#### Domestic and Overseas Companies Providing Internship Opportunities to NPUST Students

Academic year	Number of Partner Companies	Number of Interns	Company Satisfaction Rate with Student Internship Performance (%)	Company Willingness for Long- Term Internship Collaboration (%)
2021	673	1,392	85%	92%
2022	799	1,572	86%	91%
2023	820	1,553	87%	93%

# **Subsidies for Overseas Internships**

To encourage outstanding students to pursue academic exchange at foreign higher education institutions or undertake internships in public and private enterprises and research institutions abroad, and to expand international exchange opportunities for promising young students, NPUST provides scholarships to support outstanding students recommended by their departments to participate in overseas internships, dual-degree programs, professional internships, or international competitions. A dedicated section for overseas internship subsidies is also available to provide application consultations. During the 2021-2023 academic years, a total of 117 students received subsidies to participate in overseas internships, with total subsidy funds exceeding NT\$10 million, cultivating technical and vocational talents with global perspectives and overseas work experience.

#### Statistics of Students Receiving Subsidies for Overseas Internships

Academic year	Country of Internship	Number of Students Sent Abroad	Subsidy Amount (NT\$)
2021	United States, Germany, Japan, Canada, Thailand, Saint Lucia, Nauru, Eswatini	34 (13 male / 21 female)	3,194,837
2022	United States, United Kingdom, Japan, Singapore, Malaysia, Thailand	18 (6 male / 12 female)	1,867,964
2023	United States, Netherlands, Denmark, Austria, Czech Republic, Singapore, Malaysia, Japan, Thailand, Vietnam, Brunei	65 (27 male / 38 female)	5,635,233

#### 2023 Overseas Learning Sharing Session



The event provided diverse information on overseas study opportunities and immersive experiences, along with multiple sharing sessions on studying abroad. These encouraged students to explore foreign cultures, broaden their horizons, and inspire diverse learning motivations.

# 2024 NPUST Sustainability Report

# **Enhancing Career Guidance**

NPUST has established a Career Development Office to support students' career planning and smooth transition into the workforce. The office integrates on-campus and off-campus resources to plan diverse or series-based career counseling programs, including the Career Guidance Division, Employment Counseling Division, and Alumni Service Center. In addition, faculty members with career counseling certifications or licenses serve as career counselors. During the 2021–2023 academic years, career counselors guided students in more than 3,235 individual cases, representing a 4.6% increase in counseling sessions in the 2023 academic year compared with 2021.





Student Career Counseling and Guidance Activities

Application for alumni ID, contract stores

Alumni status reports

Alumni gatherings

Honorary, youth distinguished alumni selection

Alumni LINE group and fan page

NPUST Recruitment and Employment Service Platform

NPUST 1111 Recruitment Online

Campus Career Fair

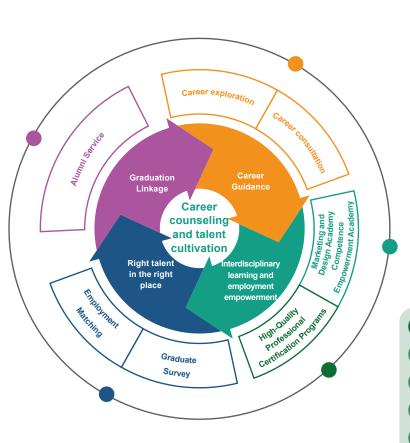
Business Presentation

Occupation Introduction

CV Writing and Communication
Skills for Interview

Graduate Prospects Survey

Alumni Career Development Survey



UCAN Career and Competency Assessment

CPAS
Aptitude Test

Career Advisor
Guidance Mechanism

Fixed-Point Career Consultation

Mobility Career Service

Onsite Career
Consultation Service

Marketing and Design Academy

Marketing and Photography

Commercial Visual Design

Presentation Preparation and Expression

Marketing Planning and Practice

Quality License Training

Level 2 License Training Course

iPAS Talents Competence Assessment License

Professional Technician License Training Course

> International License Training Course

Competence Empowerment
Academy

Time Management and Practice

Talent and Potential Development

Workplace Problems Analysis and Solutions

Workplace Interpersonal Communication and Conflict Management

Employee Skill License Training

Class 1 Professional License
Training Course

Level C Professional License Training Course

# **Strengthening Professional Competency Training**

From 2021 to 2023, a total of 225 interdisciplinary professional certification training classes were offered, with over 50% of the certifications meeting industry hiring priorities or essential workplace requirements. Subsidy funding exceeded NT\$8.065 million, marking a 35.4% increase in the 2023 academic year compared with 2021, and the number of certifications earned by students increased by approximately 16%.

#### · Professional Certification Training:

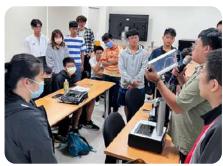
During the 2021–2023 academic years, students were awarded a total of 5,747 certifications, with 3,665 students receiving awards. The total amount of professional certification incentives distributed exceeded NT\$2.52 million.

#### • 5+2 Innovative Industry Certification Promotion:

During the 2021–2023 academic years, a total of over NT\$8.06 million was allocated to support the program. A total of 225 classes were held, training 6,815 students, with more than 6.000 certifications earned.

#### Statistics of Interdisciplinary Professional Certification Training Programs

Item / Academic Year	110	111	112
Total Funding (NT\$)	2,300,000	2,650,000	3,115,000
Number of interdisciplinary professional certificate/license training courses	59	82	84
Number of Participants	2,291	2,293	2,231



3D Printing Additive Manufacturing Engineer Certification Training Program – explained using actual VP equipment



Interior Design and Drafting Class B
Facade Design and Material Application Course

# **Innovation and Entrepreneurship Incubation**

To enhance students' employability, the University integrates the "Office of Innovation and Entrepreneurship" and the "Innovation Incubation Center" to leverage professional guidance capabilities, serving as a consultation service platform and incubation base for innovation and entrepreneurship on campus. Every year, 15 to 20 micro-courses on innovation and entrepreneurship are offered, and students are guided to participate in practical projects as well as innovation and entrepreneurship-related competitions on and off campus. From 2022 to 2023, the University guided 326 student teams to participate, winning a total of 179 awards.

# Statistics on Student Participation in Practical Projects and Innovation and Entrepreneurship Competitions On and Off Campus

Year	Guided teams for participation	Number of participating students	First place	Second place	Third place	Other awards	Awards received
2022	129	629	7	10	9	35	61
2023	102	346	7	7	9	27	50
2024	95	307	6	9	8	45	68
Total	326	1,282	20	26	26	107	179



Second Place in the Industry-Academia Cooperation Category of the 29th Information Application Service Innovation Competition for Colleges and Universities



Winner in the 2024 HSH and 19th National Zhan Guo Ce Innovation and Entrepreneurship Competition

# **Campus Recruitment and Employment Expo**

To strengthen student employment matchmaking and connection with the workplace, the University organizes a large-scale campus recruitment expo every graduation season and has specifically set up the "Career Development Office Recruitment and Employment Service Platform" to provide students with diverse job-hunting channels and help graduates grasp the latest industry trends and workplace demands. From 2022 to 2024, the number of participating companies increased from 140 to over 160, and the preliminary matchmaking success rate also grew from 54% to 63%, an increase of nearly 10%.

#### Results of the Campus Recruitment and Employment Expo

Year	Theme of the Campus Recruitment Expo	Employer	Job Openings	Number of Participants	Preliminary Matchmaking Success Rate
2022	"Employment for the Year of the Tiger, A Bright Future with Jobs"	140	22,641	1,302	54%
2023	"Welcoming Salaries with the Leap of the Rabbit, Braving the Future"	169	15,322	1,083	63%
2024	"A Century of Cultivation, Humanity and Sustainability — Dragon Soars at NPUST, Braving the Future"	169	15,985	1,408	63%



#### **Career Guidance Performance**

The University provides high-quality career guidance to help students successfully graduate, gain employment, and develop their careers. In the future, it will continue to refine career guidance services, and through cooperation with industries and surveys of student needs, it will continuously improve graduates' employment rates and career development capabilities.

Item / Academic Year	111	112
Graduation rate of students of four-year technical programs of the day school	67.15%	67.18%
Rate of students graduating in the current year of four-year technical programs of the day school	86.45%	87.18%
Employment rate of graduates	94.3%	92.4%

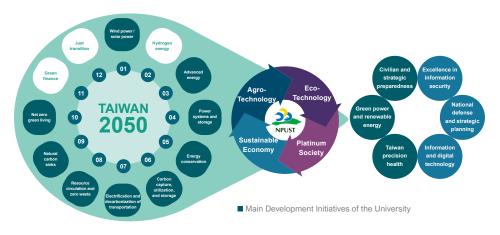




#### 2024 NPUST Sustainability Report

# 2-5 Academic Research and Industry-Academia Collaboration 8.2 9.5 | S102 | Material Topic S4

Academic research serves as the foundation of university development. NPUST places emphasis on the professionalism and diversity of research outcomes, establishing numerous university-level and college-level research centers that span multiple disciplines. The University has also implemented various subsidy programs to encourage faculty to deepen their research fields, publish journal papers, engage in industry-academia collaboration, and publish books. In addition to maintaining its long-standing focus on tropical agriculture, the University is now actively integrating expertise from other colleges and departments to develop interdisciplinary research features. At the same time, it combines Pingtung's local resources and cultural characteristics to collaborate with government agencies, enterprises, and non-profit organizations. Based on practical needs, it promotes industrial upgrading, fulfills its academic responsibility, and strives to make NPUST a major research hub in southern Taiwan, thereby expanding its academic and social influence. In the past three years, the total amount of industry-academia collaboration projects has exceeded NT\$1 billion annually, with the figure in 2024 reaching nearly NT\$1.2 billion.



The University's Four Major Development Pillars Corresponding to Six Strategic Industries and the 2050 Net-Zero Emissions Strategy

# **Sustainable Development Research Capacity**

With global climate anomalies and dramatic environmental changes, sustainable development has become a shared global objective. NPUST contributes to achieving a balance among economic development, social harmony, and environmental protection through academic research on sustainability topics. From 2022 to 2024, the University executed a total of 2,907 research projects, among which 1,116 were related to sustainability topics, accounting for approximately 38%. In addition, faculty members published a total of 1,721 journal papers, including 245 related to sustainability topics, accounting for about 14%. This indicates that research on sustainability topics by NPUST faculty has reached a considerable scale and continues to grow.

#### **Academic Research Achievements**

Item/Year	2022	2023	2024
Research projects	876	977	1,054
Sustainability-related research projects	274	368	474
Journal papers	593	609	519
Sustainability-related journal papers	81	91	73
SCI/SSCI journal papers	387	405	345
SCIE journal papers	38	47	36
International collaborative papers	127	122	106

#### **Highlights of Sustainability Research**

Associate Professor Kao Mo-Sen of the Department of Food Science received the "Taiwan Outstanding Young Sustainability Award."

2.1 9.5 12.3 13.1



Associate Professor Kao is dedicated to researching novel food processing methods. He has been listed among the world's top 2% of scientists for four consecutive years and was awarded the IUFoST Young Scientist Award. His outstanding research and teaching contributions earned him the "4th Taiwan Outstanding Young Sustainability Award" from the Taiwan Institute for Sustainable Energy in 2024. He focuses on energy-saving and wastereduction technologies, develops value-added applications for food by-products, and has published over 100 SCI journal papers, making significant contributions to the sustainable development of the food industry.

# **Performance in University-Industry Collaboration**

Industrial development must be built upon scientific and technological R&D, particularly in terms of R&D investment, talent cultivation, and the establishment of innovation systems. Upholding the principle of "value co-creation and outcome sharing," NPUST actively promotes cooperation models among industry, government, academia, and research institutions, facilitating the commercialization of the University's scientific knowledge and research achievements, and further transferring and disseminating them for industrial applications.

# Status of External Research Projects Secured by New Faculty Supported by the University Fund

Year/Item	Budget for research subsidy allocation from the university fund (NT\$)
2022	37,315,000
2023	29,015,000
2024	31,800,000

University governance is also aligned with the National Development Council's "Six Core Strategic Industries" and Taiwan's "2050 Net-Zero Emissions Pathway" transformation goals. In the past three years, the total amount of funding secured externally by new faculty members, supported by university subsidies, has accumulated to nearly NT\$100 million. Furthermore, for faculty members with limited access to industry connections, the University actively provides guidance to support their industry-academia collaboration efforts. To date, 57 faculty members have participated, resulting in accumulated industry-academia collaboration projects worth nearly NT\$6 million.

Amount of funding for subs	Unit: NT\$		
Funding source/year	2022	2023	2024
National Science and Technology Council (NSTC)	120,513,216	119,702,000	154,003,322
NSTC and others	22,472,652	15,309,390	14,754,832
Ministry of Education	238,508,231	292,195,051	366,591,241
Ministry of Agriculture	320,003,280	299,379,360	346,216,829
Other Central Government Projects	120,575,796	46,224,942	60,669,818
Local Government	65,378,202	74,940,043	69,948,780
Other Private Businesses	51,373,796	58,412,644	58,563,051
Suppliers and Private Businesses	147,404,202	131,532,009	125,502,499
Total	1,086,229,375	1,037,695,439	1,196,250,372

# Assisting Faculty Members with Limited Industry Access to Form R&D Teams and Expand Research Reach to Neighboring Schools and Industries

Year/ Item	Number of partner schools	Number of partner enterprises	Number of teams formed	Number of participating faculty members	Amount of derived industry-academia collaboration projects (NT\$)
2022	19	19	19	35	3,340,000
2023	7	8	8	17	680,000
2024	5	5	5	5	1,930,000

# **Technology Transfer Performance**

Through technology transfer and diffusion-based innovation mechanisms, the University facilitates the circulation of knowledge, value-added applications, and social inclusion, thereby making substantial contributions to economic growth and industrial development. It also regularly conducts patent technology and talent inventories, surveys for strategic alliance partners and local industry matchmaking, and provides professional services such as expert consultations, technical training, and business guidance to accelerate industrial transformation. To further improve the effectiveness of technology transfer, the University organizes faculty and student company visits and participates in industry park matchmaking events to proactively seek opportunities for industry-academia collaboration. More than NT\$10 million is allocated each year to promote practical R&D projects, transforming academic research results and patented technologies into commercial products. Through technology transfer, the University helps industries overcome technical gaps and enhance product added value, thereby fulfilling its social responsibility toward southern Taiwan's industrial development. Over the past three years, accumulated technology transfer and licensing contract revenue has exceeded NT\$30 million.

#### **Technology Transfer Performance**

	Pate	ents Grant	ted (cases	s)	Technology	Technology Transfer	
Year	Invention	Design	Utility Model	Total	Transfer (cases)		
2022	42	2	3	47	32	11,721,461	
2023	38	2	4	44	32	9,350,952	
2024	51	1	12	64	36	9,010,000	

# 2-6 Administrative Compliance and Academic Ethics GRI2-27

# **Compliance with Laws and Regulations**

To ensure that all administrative actions comply with laws, regulations, and policies, and to guarantee lawful governance, the University has established comprehensive administrative regulations, personnel systems, and accounting procedures in accordance with the University Act, Teachers' Act, and other central laws and regulations. These measures aim to safeguard the rights and interests of faculty and students, enhance administrative efficiency, and achieve the University's development goals in academic research, talent cultivation, and social service.



#### Latest revisions to personne regulations

# **Updating Regulatory Frameworks in Line with the Times**

Regarding personnel systems, the University has developed comprehensive regulations and policies for various categories of staff based on their employment sources and nature, including faculty members (professors, teaching assistants, specialized technical personnel), staff with civil servant status, personnel hired under the university fund (including teaching staff, researchers, administrative assistants), military training officers, technical workers, assistants hired under commissioned research projects, and temporary staff. Matters such as recruitment, appointment, promotion, evaluation, professional development, training, part-time employment, welfare and remuneration, assessment, attendance, advancement, retirement, and appeals are all handled in accordance with relevant laws or management regulations. To support ongoing university operations and development, relevant personnel regulations have been continuously updated. From 2022 to 2024, a total of 25 revisions were made to personnel regulations and incentive policies to ensure they remain up to date.

#### **Academic Ethics**

#### Faculty Side

In accordance with central regulations, the University has established the "Code of Teacher Ethics" and the "Regulations on Academic Ethics Management and Self-Regulation," covering teaching ethics, academic ethics, interpersonal ethics, and social ethics, to reinforce the responsibility of academic self-governance. A dedicated teacher ethics section has been created on the Personnel Office website.

The Personnel Office and the Office of Research and Development serve as the designated academic ethics units, strictly overseeing academic integrity. To handle cases involving faculty violations of qualification requirements for promotion, the University has formulated the "Guidelines for Handling Violations of Teacher Qualification Review Regulations," which

govern ethical self-regulation among faculty. A "Committee for Handling Teacher Ethics Violations" has been established to handle cases involving breaches of the Code of Teacher Ethics or contract terms.

Additionally, to ensure faculty and staff conduct themselves with integrity and adhere to legal standards while performing their duties, they must comply with the Civil Servants Service Act and the Ethical Conduct Standards for Civil Servants, thereby maintaining the University's integrity and ethical image. If any personnel are found to have violated relevant laws and regulations, administrative penalties will be imposed, and criminal cases will be referred to judicial authorities. In October 2023, the University received a notification from the Pingtung District Prosecutors Office stating that three faculty members (one resigned, one retired, and one still employed) were involved in fraud and forgery and were required to return NT\$122,388 to the University. The three individuals were immediately notified, and the funds were recovered and deposited. The prosecutor concluded the investigation and issued a deferred prosecution decision.

To effectively promote research ethics affairs in universities, NPUST co-founded the "Southern Taiwan Research Ethics Alliance" with over 50 other universities, enabling faculty and researchers to benefit from services such as operational reviews, educational outreach, and ethics consultations provided by the alliance. Furthermore, the University regularly organizes "New Faculty Orientation Seminars," "Faculty Promotion Briefings," and "Faculty Promotion Experience Sharing Sessions" each academic year to offer comprehensive academic and research ethics training, ensuring compliance in all academic activities.

#### **Faculty Participation in Academic Research Ethics Courses**

Academic year	2021	2022	2023
Number of Sessions	16	7	11
Number of Hours	31	16	20



#### Student Side

To ensure students understand academic ethics regulations, the University has formulated "Implementation Guidelines for Student Academic and Research Ethics Education Courses" stipulating that master's and doctoral students must complete and pass academic ethics courses offered by the "Center for Taiwan Academic Research Ethics Education" before they can apply for degree examinations. Additionally, each department (institute or degree program) may design its own academic and research ethics courses or alternative measures based on its specific characteristics and needs, subject to approval by the Office of Academic Affairs.

#### **Statistics on Student Completion of Academic Ethics Courses**

Academic year	2021	2022	2023
Undergraduate students	46/128	25/152	4/140
Master's students	505/547	493/607	335/522
Doctoral students	28/48	24/47	19/41

<sup>\*</sup> Number of students passed / number required to participate

#### Recipient of the National Central Library "Thesis Usage Award"



The "Thesis Usage Award" is based on the number of electronic full-text downloads. In 2023, NPUST's electronic full-text downloads reached approximately 39,917, ranking fifth among all national public technical and vocational universities.

To promote the spirit of information freedom, open access, and knowledge sharing, the University has established the "NPUST Thesis and Dissertation System" to improve the thesis submission process, enhance the efficiency of academic output, and actively encourage researchers to authorize their research works for full-text public access and submission to the National Central Library's Thesis and Dissertation Knowledge Value-Added System.

# **Intellectual Property Protection**

Recognizing the need for intellectual property (IP) protection to advance in step with industrial upgrading and economic development, and in response to growing attention to IP protection in the academic sector, the University has established the "Intellectual Property Advisory and Review Committee." It also hosts the "IP Express Series Workshops" based on the four major IP categories — copyright, trademark, patent, and trade secret — covering topics such as campus copyright, patent application strategies, IP rights negotiation and contract negotiation, trademark



IP Express Series Workshops

registration strategies, and due diligence on ownership of R&D results, to raise awareness of IP protection among faculty, staff, and students.

In addition, to cultivate professional talent in technology innovation management equipped with entrepreneurial spirit, R&D management, practical IP management skills, international perspectives, and humanistic literacy — all aligned with modern workplace demands — the University offers required and elective courses on topics such as Technology Management, Intellectual Property Rights, Patent Mapping and Competitive Strategy, IP Management Practicum, Technology Transfer and Valuation. IP-related courses have also been added to the general education curriculum to instill proper IP awareness among students. Over the past three academic years, the average participation rate in general education IP courses has reached nearly 24%, accounting for about one-quarter of all course enrollments.

#### **General Education IP Courses Offered**

Academic year	Rate of IP right courses through general education	Percentage of students taking IP right courses through general education
2021	1.14%(65/5,723)	24.93%(2,558/10,261)
2022	0.94%(54/5,741)	21.79%(2,214/10,162)
2023	1.16%(66/5,708)	23.87%(2,362/9,894)

<sup>\*</sup> Ratio of General Education IP Courses: Number of IP Courses / Total Courses

<sup>\*</sup> Ratio of Students Taking IP General Education Courses: Number of Students Taking IP Courses / Total Student Enrollments

# 2-7 Sustainable Governance Awards 4.3 16.6 | G101 | Material Topic G5

The University actively promotes ESG (environmental, social, and governance) initiatives, centering on green campus development, social responsibility, and excellence in education. By advancing the United Nations Sustainable Development Goals (SDGs), the University continues to make breakthroughs in global sustainable education and impact, striving toward a more outstanding future.

# Groop

**UI GreenMetric World University Rankings** 

#### **Times Higher Education Impact Rankings**

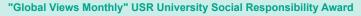
# Times Higher Education Impact Rankings





- 2014–2024: Ranked No. 1 nationwide for 11 consecutive years
- 2024: Ranked No. 2 in Asia and No. 23 in the world
- 2023: Ranked No. 4 in Asia and No. 28 in the world
- Times Higher Education World University Rankings 2024
- Ranked in the 101–200 range globally, No. 1 among universities of science and technology, No. 5 nationwide, and in the global top 100 for five indicators.
- Times Higher Education World University Rankings 2023
- Ranked in the 201–300 range globally, No. 1 among universities of science and technology, No. 6 nationwide, and in the global top 100 for three indicators.
- 2023: Winnerof the 2023 National Sustainable Development Award (Education Category)

#### **Taiwan Corporate Sustainability Awards (TCSA)**



#### "CommonWealth Magazine" University Citizen Award

15 天下大學公员











#### 2023 Gold Award for Sustainability Report (University Category)

• 2021 Platinum Award for Sustainability Report (University Category)

#### 2023

- First Prize in the Green Campus Category
- Model Award in the Co-Living and Well-Being Category-"Protecting Brave Warriors, Spreading Happiness for People and Pets"



 Model Award in the Co-Living and Well-Being Category-"Elderly-Friendly Mutual Support and Local Care for the Elderly" • 2024: Ranked No. 1 among public universities of science and technology

# **ESG Governance – SDG Highlights**

# TSH@NPUST 1.5° C Food and Consumption Transition Hub

Global warming has led to increasingly frequent extreme weather events. If global temperatures rise by more than 1.5° C, it will pose severe threats to food production and biodiversity. NPUST has long been committed to advancing agricultural technology. In support of the United Nations SDGs, it collaborated with the Taiwan Sustainability Hub to establish the "TSH@NPUST 1.5° C Food and Consumption Transition Hub" in 2023, focusing on the Water-Food Nexus (WF), The initiative aims to develop and promote new low-carbon and regenerative agricultural production models, while addressing issues related to green consumption to reshape food production and consumption systems and achieve ecological balance.

#### **Kev Initiatives**

- Low-Carbon Farming and Regenerative Agriculture: Develop and promote low-carbon farming methods and regenerative production models to improve soil health, enhance ecosystem services, and achieve sustainable food production.
- Promotion of Green Consumption: Advocate for green consumption, raise public awareness of sustainable consumption, and encourage behavioral changes to support sustainable producers.
- Agricultural Waste Reuse: Promote the reuse of agricultural waste to achieve a circular economy, reduce resource waste, and lower environmental impact.





TSH@NPUST Taiwan Sustainability Hub Inauguration Ceremony

#### **Achievements and Recognition**

Internationalization of Agricultural **Technology Promotion** 

2.a 12.3 13.3 17.16

**Latest Low-Carbon Rice Cultivation** Collaboration

2.3 13.3 17.16



The University signed a memorandum of understanding with Magnus in the Philippines to promote low-carbon probiotic rice farming methods, helping local farmers increase yields and reduce resource consumption while advancing sustainable agriculture.

The University's low-carbon rice cultivation technology has been adopted by 7-Eleven, with the launch of the new "Spinach and Cheese Grilled Chicken with Italian Vegetables" meal, embodying the concept of sustainable dining.

Champion in the IMV Technology Innovation

4.7 8.3 11.a 17.16

"Rural UP!" International Award

The University's Sustainability Hub team won the "Rural UP!" International Award in a collegiate rural revitalization competition, promoting cultural experiences for international students in rural communities and fostering international exchange and local development.

The University team's "SPRI Low-Carbon and Eco-Friendly Rice Cultivation" technology won first place in the ecological sustainability category of the IMV Technology Innovation Awards, demonstrating innovation in sustainable agriculture.



12.3 13.3 17.16



- Committed to enhancing the quality of higher education, the teaching environment, and the recruitment of outstanding faculty, with expenditures on teaching, research, student guidance, and support accounting for nearly 60% of total expenditures the highest proportion.
- Financial operations are transparent, with the annual "University Fund Planning Report" and "University Financial Performance Report" disclosed in the school affairs information section.
- Internal controls are rigorous. Each year, an Internal Control System Self-Assessment Implementation Plan and a University Fund Audit Report are prepared and disclosed in the school affairs information section.

LINEAL NITE 40

# 3-1 Financial Overview and Sustainable Investments GRI201-4 | SV-ED-270a.3

To enhance NPUST's competitiveness in higher education and meet industry development needs, the central government has continued to allocate budgets in recent years to support the University's development. In addition to actively securing subsidies from the Ministry of Education, the University has also obtained funding from the National Science and Technology Council (NSTC), the Ministry of Agriculture, and other central agencies to improve the technical and vocational education environment. As effective university governance requires appropriate financial support to ensure the steady operation of the University Fund and achieve maximum benefit, the increasingly competitive higher education landscape and limited central government subsidies have prompted the University to adopt a sustainable financial strategy focused on revenue expansion, cost control, and precise investment planning, aiming to strengthen both financial independence and sustainability while advancing institutional development.

In terms of revenue expansion, the University continues to increase income from industryacademia collaborations, government subsidies, and continuing education, including securing competitive grants from the Ministry of Education, government R&D and industryacademia projects, private industry-education collaboration programs, offering continuing education courses, increasing venue and equipment rental income, and generating interest from fixed deposits. The University also actively engages in fundraising efforts, and from 2022 to 2024, cash and in-kind contributions have exceeded NT\$2.44 billion. To strengthen budget management strategies, the University divides expenditures into two categories: "routine expenditures" and "task-based expenditures." Routine expenditures are subject to strict budget execution controls and enhanced internal control mechanisms, while taskbased expenditures are managed through project-based approaches to improve performance. Additionally, financial audit mechanisms have been implemented to enhance operational efficiency, increasing the flexibility and effectiveness of the University Fund.

According to statistics, the University's primary sources of financial revenue are government subsidies and self-generated income. On the expenditure side, guided by a philosophy of fairness and public interest and committed to improving the quality of higher education, the teaching environment, and faculty recruitment, spending on teaching, research, student guidance, and support accounts for the largest share at 57.34% of total expenditures.

Total	Assets		Unit: NT\$ 10 thousands
Account / Year	2022	2023	2024
Total Assets	856,469	868,869	648,798

<sup>\*</sup> In 2024, "Payable Custodial Assets" of NT\$25,003.5 million were reclassified from "Other Liabilities" to "Other Assets.'

Breakdown of Various Financial Reve	Unit: NT\$ 10 thousands		
Accounting Item / Year	2022	2023	2024
Total Income	262,547	267,294	286,755
Income from Government Subsidization	134,239	134,153	145,570
Income from Subsidization for Teaching and Research	105,592	105,592	114,979
Income from Other Forms of Subsidization	28,647	28,497	30,588
Self-Raised Income	128,308	133,141	141,185
Income from Tuition and Fees	47,955	45,885	46,448
Income from Cooperative Education	65,984	70,905	72,179
Income from Continuing and Extension Education	1,282	1,397	1,168
Rent and royalty income	888	715	623
Miscellaneous Income	631	541	472
Income from Interest	1,612	3,058	3,294
Balance from Currency Exchange	167	1,476	1,471
Income from Asset Use and Royalty	4,655	4,091	4,165
Income from Donation	1,161	1,434	8,775
Income from Indemnification (Compensation)	0	0	52
Income from Fines for Non- Compliances	87	308	87
Miscellaneous Income	3,886	3,331	2,451

and Fulfillment of 5. Responsibility (S)

7. Appendix

#### **Breakdown of Various Financial Expenditures**

#### Unit: NT\$ 10 thousand

Accounting Item / Year	2022	2023	2024
Total Expenditure	274,518	276,542	296,068
Cost of Teaching, Research, and Student Guidance	162,260	159,495	169,772
Cost of Cooperative Education	65,825	70,883	72,087
Cost of Continuing and Extension Education	1,277	1,389	1,168
Student Scholarships and Incentives	6,277	7,227	6,645
Management and general affairs expenses	31,036	30,062	31,434
Research, development, and training expenses	888	715	623
Miscellaneous Business Expenses	627	537	469
Deficit from Currency Exchange	0	0	10
Deficit from Property Transaction	4	6	114
Miscellaneous Expenses	6,324	6,228	13,746

#### Sustainable Investment

NPUST adopts a dual-track strategy of "stable returns" and "sustainable value" for its University Fund to ensure financial stability while fulfilling environmental responsibilities.

#### **Investment Management Team**

The University has established an "Investment Management Committee" to plan the investment and utilization of the University Fund. Additionally, a "University Fund Audit Committee," composed of faculty members with experience in financial auditing or relevant expertise, conducts on-site inspections and audits annually based on the University's development plan and high-risk internal control items. Audit results are reported at university meetings and disclosed in the school affairs information section as required. To ensure sound financial planning and support institutional development, the University prepares a "University Fund Planning Report" and compiles a "University Financial Performance Report." both of which are approved by the University Fund Management Committee and the University Council before being disclosed publicly and submitted to the Ministry of Education.

# **Investment Strategy and Allocation**

To increase self-generated revenue and reduce various expenditures while enhancing the financial performance of the University Fund, the University's investment strategy primarily focuses on U.S. dollar fixed deposits and bond purchases, ensuring prudent capital utilization and stable returns.

#### **Investment Portfolio Structure**

Year	New Taiwan dollar fixed deposits (NT\$)	U.S. dollar fixed deposits (US\$)	Bonds (US\$)
2022	1,440,172,575	8,413,391.48	0
2023	1,386,462,326	3,721,075.63	1,643,050
2024	1,636,462,326	0	1,643,050

#### Proportion and Performance of Sustainable Investment

The University's sustainable investment strategy not only pursues stable financial returns but also indirectly supports the sustainability efforts of these companies. These enterprises actively promote environmental protection, energy management, climate action, and social responsibility — reflecting the University's emphasis on environmental and social responsibility in its investment decisions.

The University's sustainable investment ratio has remained at a high level, supporting investment targets that meet ESG standards. In 2024, the amount of sustainable investment reached NT\$1,687,396,876, accounting for 81.8%. In the future, NPUST will continue to focus on ESG issues and incorporate more sustainability considerations into its investment decisions, contributing to environmental sustainability.

#### **Proportion of Sustainable Investment**

Year	Administrative Fund Investment Scale (NT\$)	Sustainable Investment Amount (NT\$)	Sustainable Investment Ratio (%)
2022	1,995,812,489	1,700,987,710	85.2%
2023	2,074,926,439	1,552,750,220	74.8%
2024	2,062,173,824	1,687,396,876	81.8%

<sup>\*</sup> The administrative fund investment scale only includes investments in time deposits and bonds.

# **3-2Financial Risk Assessment and Management**

To effectively improve the utilization efficiency of the administrative fund, the University strictly follows the "Regulations for the Establishment of Administrative Funds of National Universities and Colleges," the "Regulations on the Management and Supervision of Administrative Funds of National Universities and Colleges," the "Key Points for Government Internal Control Supervision Operations," the "Guidelines for the Management of Income and Expenditure of Donations to the Administrative Fund of National Pingtung University of Science and Technology," the "Regulations on the Management of Income and Expenditure from Investment Gains of the Administrative Fund of National Pingtung University of Science and Technology," and the "Key Points for the Establishment of the Investment Management Team of the Administrative Fund of National Pingtung University of Science and Technology," among other regulations. The Administrative Fund Management Committee is also established to review the annual budget estimate.

Statistics	of Actual	Surplus	and	Deficit	over	the	<b>Past</b>
		Three Y	ears'				

Unit: NT\$10 thousands

Account / Year	2022	2023	2024
Total Income	262,547	267,294	286,755
Total Expenditure	274,518	276,542	296,068
Add: Amount of depreciation and amortization excluded from surplus/deficit calculation	13,091	12,843	12,548
Substantive Surplus/Deficit	1,120	3,595	3,235

# Personnel Expenditure as a Proportion of Annual Final Accounts of Self-generated Income over the Past Three Years

Unit: NT\$10 thousands

Years		-	
Account / Year	2022	2023	2024
Amount of Basic Salary of Personnel within Staff Complement (plus any seniority salary) and Extra-Allowance Payments	11,913	11,109	11,922
Expenses of Personnel Outside Staff Complement	46,623	51,578	43,916
Renumeration for Credits in Self-Raised Income of Personnel within Staff Complement	1,040	983	1,280
Total Amount of Payments within 50% of Self-Raised Income Under Article 9, Paragraph 1, Act for Management and Supervision of Endowment Fund for National Universities (A)	59,576	63,995	57,439
Self-Raised Income After Financial Account in the Most Recent Year (B)	125,491	128,308	133,141
Ratio of Personnel Expenses within 50% of Self-Raised Income Under Article 9, Paragraph 1, Act for Management and Supervision of Endowment Fund for National Universities (C=A/B)	47.47%	49.88%	43.14%

#### **Available Funds After Final Accounting in Past 3 Years**

Unit: NT\$ 10 thousands

Account / Year	2022	2023	2024
Cash and Term Deposit	175,921	186,049	198,104
Add: Short-term realizable assets	4,964	5,592	4,862
Less: Short-term payable liabilities	90,203	102,165	113,955
Less: Number of unrealized subsidization plans in capital account	2,064	5,119	13,405
= Available Fund (H)	88,618	84,357	75,606

# Average Monthly Cash Current Expenditure After Final Account in Past 3 Years

Unit: NT\$ 10 thousands

Fast 3 Tears			uiousaiius
Account / Year	2022	2023	2024
Total Operational Expenditure	269,978	274,518	276,542
Less: Depreciation, Depletion, and Amortization	39,057	31,512	31,705
Less: Cost of Cooperative Education	63,006	65,825	70,883
Add: Depreciation, Depletion, and Amortization Under Cost of Cooperative Education	2,141	1,654	2,066
= Cash Current Expenditure (I)	170,056	178,835	176,020
Monthly Cash Current Expenditure (J=I/12)	14,171	14,903	14,668
Multiples of Available Funds in Monthly Cash Current Expenditure After Final Account in the Most Recent Year (K=H/J)	6.25	5.66	5.15

#### Incomes and Expenditures (Final Account) in Past 3 Years

Unit: NT\$ 10 thousands

Account / Year	2022	2023	2024
MOE Basic Subsidization	105,592	105,592	114,979
MOE Additional Subsidization (including competitive projects)	28,647	28,561	30,591
Self-Raised Income	128,308	133,141	141,185
Total Income	262,547	267,294	286,755
Total Expenditure (excluding depreciation)	243,006	244,836	255,671
Total Expenditure (including depreciation and amortization)	274,518	276,542	296,068

# 3-3 Internal Control and Internal Audit GRI2-18

#### **Internal Control System**

To promote an integrated internal control mechanism, implement self-monitoring, effectively reduce the possibility of various campus risks, and ensure the achievement of the University's medium- and long-term goals, the University has established the Internal Control Task Force, chaired by the Executive Vice President, responsible for supervising and managing all internal control and risk assessment operations. In accordance with relevant regulations from the Ministry of Education, the University has formulated the "Principles for Promoting Risk Management Operations" and the "Implementation Guidelines for the Administrative Fund and Internal Control Audit" to ensure the continuous and effective operation of the internal control system.

The University's internal control system functions through mechanisms such as the control environment, risk assessment, control activities, information and communication, and monitoring operations, effectively reducing internal risks that could lead to unachieved objectives.

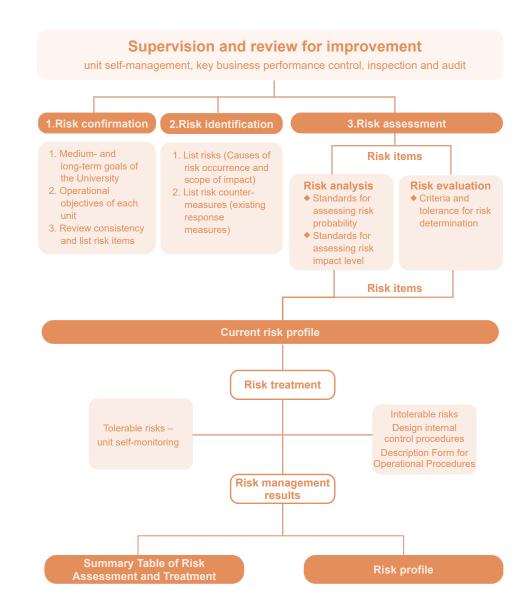
Internal Control Audit Operations						
Phase I	Self- management	Each unit proactively implements risk management and internal control based on its responsibilities and objectives.				
Phase II	Key Business Control and Management	High-risk or designated operations are regularly reviewed, with response strategies and internal control measures implemented.				
Phase III	Inspection and Audit	Through internal audits and self-assessments, the effectiveness of risk mitigation improvements is tracked.				

# **Internal Audit Operations**

The University has established the Administrative Fund Audit Team, responsible for promoting internal control and audit operations to ensure the effective management and utilization of the administrative fund and improve operational performance. Since 2020, the internal control audit operations have been conducted according to the annual audit plan formulated by the Administrative Fund Audit Team. The scope covers:

- Performance of the administrative development plan
- Control measures for high-risk internal control items
- Audits of Ministry of Education subsidy programs and National Science and Technology Council research projects

All audit results are included in the Annual Administrative Fund Audit Report and disclosed in the Administrative Information Disclosure Section to ensure information transparency and accountability.



Risk Management Structure and Operational Flowchart

4.

# Green University and Environmental Sustainability (E)



- Since 2014, the University has ranked No. 1 nationwide for 11 consecutive years in the UI GreenMetric World University Rankings and was awarded 2nd place in Asia and 23rd in the world in 2024.
- In collaboration with the CJL Foundation, the University has implemented a long-term tree-planting project, successfully planting over 10,000 saplings covering 10 hectares with a survival rate of over 90%, thereby reducing more than 100 tons of greenhouse gas emissions
- In 2024, the University conducted its first campus greenhouse gas inventory and obtained an external verification report.
- To promote energy conservation and carbon reduction, the University collaborated with the Ministry of Transportation and Pingtung Bus on the "Campus Bus Entry Project for Colleges and Universities," achieving over 322,000 riderships between academic years 2021 and 2023.
- Green Buildings: As of 2024, eight campus buildings, including the Sustainable R&D Center and Technology Agriculture Center, have obtained Green Building Candidate Certificates.
- Energy Efficiency Management: As of 2024, the replacement rate of LED lighting reached

- 100%, energy-efficient air conditioners 95%, and Grade-1 energy-efficient refrigerators 80%.
- Through active energy-saving measures, the annual average power-saving rate reached 1.62%, meeting regulatory targets. The average EUI over the past three years was 89.97, lower than the baseline set by the Ministry of Economic Affairs.
- Campus wastewater has achieved "100% recycling and zero discharge," reducing secondary water consumption by approximately 180,000 cubic meters per year and cutting BOD emissions by 1,461 kilograms per year.
- From 2022 to 2024, industry-government-academia collaborative disaster prevention and mitigation projects reached a total of NT\$730 million.
- From 2022 to 2024, the procurement ratio of products and services from welfare institutions for persons with disabilities exceeded the Ministry of Health and Welfare's 5% requirement, reaching over 10% in 2024.
- From 2022 to 2024, the green procurement ratio exceeded the Ministry of Environment's 95% requirement, reaching 100% in 2024.
- From 2022 to 2024, 100% of procurement in engineering, finance, and labor services was sourced from local suppliers in Taiwan, fully supporting green office practices (water, electricity, and paper conservation).

# **4-1 Climate Change Response Actions**

"Green University" is the continuous development goal of NPUST and a key element in promoting a sustainable campus. It carries significant positive meaning in many aspects, including long-term cost control and production efficiency, school image building, reputation enhancement, and contributions to overall social development, while also playing a role in global environmental protection. Through daily practices — including the management of energy, air, water resources, and waste — the University reduces environmental impact and damage. From the perspective of ecology and nature, it connects the interactions among humans, animals, plants, and the environment, building a multi-layered ecological landscape on campus. In addition, the Talloires Declaration is currently recognized as the most significant international document for universities in promoting sustainable development. NPUST joined the Taiwan Green University Alliance in 2012 and simultaneously signed the Talloires Declaration, pledging to integrate the concept of "environmental sustainability" into university governance and to comply with relevant environmental laws and regulations. To date, there have been no incidents of environmental law violations.

#### **TCFD Climate Change Management**

Climate change risks mainly affect the campus environment. During typhoons or heavy rainfall, damage may occur to buildings and campus ecology, commuting safety of faculty and students, documents and archives, and system equipment. Drought-induced water restrictions may affect campus water use, and the urban heat island effect may require prolonged air conditioning use. These circumstances lead to increased repair, maintenance, and insurance costs, as well as additional personnel expenses such as overtime for disaster response personnel. To respond to climate change, the University enhances its climate adaptation capabilities and strengthens campus resilience to mitigate the impacts or damage caused by climate change — or to take advantage of potential opportunities. Efforts include conducting greenhouse gas inventories, promoting green transportation, installing renewable energy facilities, conserving energy, recycling and reusing waste, and implementing environmental sustainability education. Through these measures, the University fosters a shared understanding among faculty and students regarding a sustainable campus, with the ultimate goal of achieving a low-carbon campus and net-zero emissions by 2049.

Since 2019, the University has actively collaborated with the CJL Foundation on green initiatives through tree planting, which helps regulate the climate. Numerous volunteer and faculty-



student planting events have been held at the Darun and Baoli training forests, where over 10,000 saplings have been planted, setting a model for environmental sustainability. The tree planting project has become a benchmark example of Corporate Social Responsibility (CSR) and University Social Responsibility (USR) integration. Over the years, more than 10,000 saplings have been successfully planted, covering an area of 10 hectares, with a survival rate exceeding 90%, effectively creating a green barrier for Taiwan.

"Forest carbon sinks," which absorb and store carbon dioxide through vegetation, are among the most cost-effective and impactful methods of carbon reduction. Over five years of afforestation, NPUST has reduced more than 100 metric tons of greenhouse gases, demonstrating its dedication to mitigating global warming.







Forest of Hope: A Decade of Growth

#### **♦** Forest Vegetation Coverage on Campus

	Total Area (m²)	Forest Vegetation Area (m²)	Vegetation as a Percentage of Total Area (%)
Main Campus	2,973,714.48	1,064,932.45	35.8%
Baoli Experimental Forest	2,679,928	1,723,001.82	64.2%
Daren Experimental Forest	5,760,622	5,279,040.92	91.6%

# 4-2 Low-Carbon Campus and Net-Zero Transition 9.4 13.3 | GRI 305-1~305-3 | Material TopicE2

Vision and Strategies of

The University is committed to building a low-carbon campus and advancing toward net-zero transformation. To accurately understand the campus greenhouse gas emissions profile, the University established a greenhouse gas inventory task force in accordance with ISO 14064-1:2018 standards and with reference to the WBCSD/WRI Greenhouse Gas Protocol. This inventory serves as the foundation for subsequent carbon reduction actions.

#### Carbon Reduction Goals

2024	Conduct a campus greenhouse gas inventory
2030	Achieve 50% carbon neutrality
2049	Achieve 100% carbon neutrality

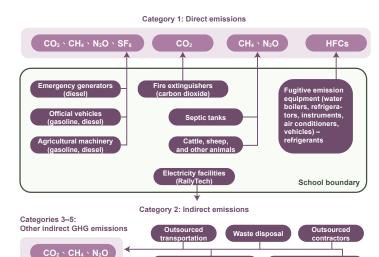


In 2024, the University conducted its first campus greenhouse gas inventory, using 2023 as the base year. The inventory covered five areas: the Main Campus, Downtown Campus, Coconut Grove Dormitory, Baoli Forest, and Darun Forest. Third-party external verification was completed in September 2024. In 2023, the total greenhouse gas emissions were 20,884.7285 metric tons CO<sub>2</sub>e. Through the inventory, the University can accurately identify its greenhouse gas emissions and focus on reducing energy consumption to gradually achieve its emissions reduction targets.

#### **◆** Emission Categories and Equivalent Emissions

Species	Emission equivalent (metric tons CO <sub>2</sub> e/year)	Description
Category 1 (Direct Emissions)	1,950.0660	Primarily fugitive emissions
Category 2 (Indirect Emissions)	14,283.6503	Electricity use accounts for 68.4%
Categories 3–5 (Other Indirect Emissions)	4,650.9389	Includes commuting, purchased energy, and electricity use in leased spaces

<sup>\*</sup> Activity data (usage/production/purchase/filling/estimated/fugitive amounts) × Emission factor (Environmental Protection Administration's Greenhouse Gas Emission Factor Management Table, version 6.0.4, June 2019) imesIPCC 2021 Global Warming Potential (GWP) coefficient = CO2 equivalent



Identification of Emission Sources - Main Campus

#### Total Greenhouse Gas Emissions (Categories 1 to 6)

#### Unit: metric tons CO<sub>a</sub>e/year

Species	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs	PFCs	SF <sub>6</sub>	NF <sub>3</sub>	Total
Emission equivalent	19,142.9106	1,252.5302	27.4302	461.8575	0.0000	0.0000	0.0000	20,884.7285
Percentage	91.66%	6.00%	0.13%	2.21%	0.00%	0.00%	0.00%	100.00%





Greenhouse Gas Verification Report and Opinions

#### 2024 NPUST Sustainability Report

#### **Green Transportation and Carbon Reduction Actions**

With net-zero carbon emissions now a shared responsibility — a "shared destiny on the same island" — National Pingtung University of Science and Technology (NPUST) is actively responding to the government's "Net-Zero Island" policy. Leveraging regional advantages and strategic actions, the University has been comprehensively promoting a green transportation system since 2016. Given the large size of the campus and the heavy reliance of faculty, staff, and students on cars and motorcycles for commuting, NPUST collaborated with the Ministry of Transportation and Communications and Pingtung Bus Company to implement the University Shuttle Bus Access Project, creating a green bus network connecting on- and off-campus routes and improving public transportation usage. From the 2021 to 2023 academic years, the University invested NT\$2,536,643 in subsidies, benefiting a significant number of passengers.

To further expand low-carbon transportation coverage, the University has partnered with service providers to offer discounted rental programs for electric scooters and electric bicycles, and has installed free charging stations at locations such as the administration building and dormitory areas. The campus also features environmentally friendly bicycle rental stations, allowing students to borrow bicycles for short-distance travel and reduce the use of fuel-powered vehicles. Since 2019, the University has continuously expanded pedestrian pathways throughout the campus to create a pedestrian-friendly, slow-mobility, and sustainable campus

Through a series of transportation greening measures, NPUST is steadily becoming a model of a low-carbon, sustainable campus and fulfilling its leadership role in climate action within the education sector.







Year	Total ridership
2022	69,716
2023	66,011
2024	79,748



- Electric green energy buses\* 4
- Electric green energy bus charging pile\* 1
- Total ridership over the past three academic years: 106,786



- · Electric scooters and bicycles rental/280
- Electric charging stations\* 120
- · 30 electric official scooters
- · Total rentals over the past three academic years: 2,152



· Fast-charging stations and lithium battery storage facilities\*



- · 200 eco-friendly bicycles
- Bicycle air stations\* 10



- · Pedestrian walkways with treelined green corridors
- · Total length 1562.95m.

# **Green Buildings on Campus**

All new campus facilities at NPUST are designed with green building principles in mind, aiming to consume minimal natural energy and resources, reduce waste generation, and adopt a comprehensive, systematic, and eco-friendly design approach to create a healthy living environment that coexists harmoniously with the Earth. Green buildings are evaluated based on four major criteria — ecology, energy conservation, waste reduction, and health — which are further divided into nine indicators: greening volume, site water retention, water resource recycling, daily energy conservation, CO<sub>2</sub>e reduction, waste reduction, wastewater and waste management, biodiversity, and indoor environment. As of the end of 2024, the University has obtained eight Green Building Candidate Certificates.



Tropical Agriculture Research
Building



Sustainability R&D Center



Working Dog Breeding Farm



Department of Wood Science and Design Innovative R&D Building



Immunity Horse Breeding Farm



Aquaculture Genetic Resource Conservation Center



Intelligent Agricultural Machinery Center II



Smart Agriculture Center



Natural lighting or LED illumination



Rainwater Harvesting System



Hot aisle and cold aisle airflow system



Installation of sunshades

NPUST's green buildings incorporate a variety of environmentally friendly technologies to enhance energy efficiency and environmental sustainability. Use of eco-friendly materials and natural lighting combined with LED lighting to reduce energy consumption. Rainwater recycling systems in some buildings allow water resources to be reused. The server room in the Information Technology Center adopts a hot aisle/cold aisle airflow system to improve cooling efficiency. The Administration Building is equipped with sunshades to block external heat sources and reduce air conditioning use, fully embodying the concept of energy conservation and carbon reduction.

# 4-3 Energy and Resource Management GRI 2-4

#### **Energy Conservation and Management**

Because the campus covers a large area and has high electricity demand, the University has installed a campus Energy Management System (EMS) and an intelligent airconditioning management system in all large buildings to effectively reduce electricity consumption and precisely manage highenergy-use areas. In 2024, an "Electricity Monitoring System Information Dashboard" was also added. The system can monitor the electricity consumption of all buildings across the campus in real time, quickly detect abnormalities, and accurately identify highenergy-consuming buildings to facilitate cause analysis and the adoption of corrective



Electricity Monitoring System Information Dashboard

measures. In addition, intelligent sensing technology has been introduced into on-campus air-conditioning equipment. It can automatically detect the occupancy status of spaces and turn off the power when no one is present to prevent energy waste. The system also provides a comparison of electricity consumption and power generation data with the previous year to help set annual energy-saving targets and displays the amount of solar power generated on campus, demonstrating the University's achievements in the development of renewable energy.

The University has completely replaced high-efficiency equipment and LED lighting fixtures, installed smart meters, and reviewed electricity contract capacity to precisely control electricity consumption and reduce power losses. All student dormitories are equipped with energy-saving facilities such as heat pumps for hot water supply, water-saving faucets, and water-saving toilets, and regular maintenance ensures the proper functioning of these facilities. As of 2024, the replacement rate of LED lighting has reached 100%, the replacement rate of energy-saving air-conditioning units has reached nearly 95%, and the replacement rate of Grade 1 energy-saving refrigerators has reached 80%.

To strengthen the effective use of campus energy, the University has established an "Energy Conservation Promotion Group" dedicated to improving campus energy efficiency and achieving sustainable development goals. The group regularly reviews and updates energy-saving targets and implementation plans, formulates various improvement strategies and concrete measures, and has achieved remarkable results. In recent years, the average annual electricity-saving rate has reached 1.62%, meeting the government's energy-saving target requirements. However, due to the commissioning of new buildings in 2024, the overall electricity consumption increased, resulting in the Energy Usage Index (EUI) exceeding the baseline value. The University will continue to refine various energy-saving measures, improve energy efficiency, and move toward building a low-carbon, energy-saving sustainable campus.

#### **Green Energy Equipment and Renewable Energy**

In line with government energy policies, NPUST is committed to developing renewable energy generated by nature and stored by users, with the goal of self-generation and self-consumption. On-campus renewable energy generation facilities include solar, wind, biodiesel, and biomass energy. In recent years, a "Sustainable R&D Center" has been established to develop advanced green energy technologies, create value through agricultural and forestry circular economies, research biomass energy cycles, and promote sustainable livestock environment technologies. These efforts aim to increase the proportion of renewable energy use to 20% by 2030.

Various green energy facilities have been gradually installed on campus. The main sources of green energy are solar panels installed at the Smart Agriculture Center for Agrophotovoltaics, the Agrophotovoltaics Aquaculture Feed Plant, the Mushroom Factory, the Fruit and Vegetable Greenhouse, eight student dormitories, the Library and Convention Center, and the Comprehensive Building. Additional energy is generated from wind turbines in the Plant Factory Practice Greenhouse and from the biogas power generation system using pig manure in the livestock farm.

#### **◆** Energy Use Statistics

Item/Year	2022	2023	2024
Non-renewables (GJ)	78,425	85,256	88,015
Renewables (GJ)	19,444	19,538	19,582
Total Electricity Use (GJ)	105,146	104,794	107,597
Floor Area (m²)	325,890	325,890	327,390
Energy Use Intensity (EUI)	89.6	89.03	91.29

(\* Information Recompiled: 2022 renewable energy data corrected)

# **Waste Management**

Campus waste is divided into "hazardous waste" and "non-hazardous waste." Hazardous waste mainly comes from medical consumables and laboratory chemical waste from teaching and research. These are collected weekly by the Environmental Safety and Health Center, temporarily stored, and then transported by licensed waste disposal companies to qualified treatment facilities. The entire process follows waste disposal regulations for classification, storage, and disposal. The University has had no incidents of contractor violations, leaks, or waste imports/exports. Non-hazardous waste is recycled and reused according to its nature, following the principles of resource recycling, zero-waste regeneration, and environmental friendliness. Organic waste is collected, transported, stored, and reused, and innovative technologies and R&D are applied to create new "green gold" value.

То	Total Weight of Campus Non-Hazardous Waste and Hazardous Waste Unit: t/year							
	Disposal Method	Waste Category / Year	2023	2024				
	Incineration	General Waste	310.4	311.47	307.03			
		Paper	80.6	85.9	103.9			
		Metal Can	1.7	1.2	2			
No		Other Metals	18.1	9.2	10.5			
Non-Hazardous Waste		Aluminum Can	0.9	0.7	1			
zard	Recycling	PE Bottle	1.5	13.6	15.6			
sno	and reuse	Plastics	10.5	5.1	5			
Was		Waste Batteries and Waste Fluorescent Tubes	0.2	0.2	0.007			
te		Waste DVDs and Waste Cells	0.3	0.3	0.5			
		Waste Home Appliances/Waste Computers/Waste Toner Cartridges/Waste Bicycles	2.8	2.4	1.5			
		Kitchen Leftover	18.0	14.1	11.3			
Total		444.9	444.2	458.3				
		Corrosive Mixed Waste	0.3	0.4	1.1			
		Hexavalent Chromium	0.5	0.3	0.4			
_	Incineration	Mixed Waste Containing Toxic Metals and Exceeding the Leaching Limit	1.0	0.7	0.6			
łaza		Waste Liquids with pH ≥12.5	2.0	1.3	1.8			
rdou		Waste Liquids with pH ≤2	3.2	2.2	3.5			
Hazardous Waste		Mixed Waste Containing Organic Pollutants and Exceeding the Leaching Limit	1.3	1.1	1.6			
Ö	Chemical Treatment	Mixed Waste Containing Organic Chemicals and Exceeding the Leaching Limit	7.6	4.0	5.4			
		Scrapped Oil Mixtures	2.7	0.3	0.3			
		Flammable Mixed Waste	1.3	0.8	0.9			
Total			19.7	11.1	15.6			

0. Introduction

To maintain campus cleanliness and hygiene and provide faculty and students with a quality teaching, research, and learning environment, the University implements the "3R" environmental protection principles — Reduce, Reuse, Recycle — in accordance with the "Waste Disposal Act," the "Resource Recycling and Reuse Act," and other central regulations. It promotes resource recycling and reuse to effectively remove waste and reduce environmental burden. A "systematic" management approach has also been introduced, implementing four major actions: "use of recycled materials, reduction and improvement, reuse, and classified recycling."

#### Waste Reduction, Recycling, and Disposal Measures



**Classified Recycling** 

 General waste, paper, and recyclable waste bins are installed, clothing recycling bins are added in dormitory areas, and food waste bins are installed in dining areas.



**Reducing Paper and Plastics** 

- Use reusable foodware and ban single-use foodware.
- Reusable tea cups are used in meetings, and water is not provided in disposable cups.
- A total of 386 water dispensers are available free of charge on all campuses.



Donation, Exchange, or Sale

- A total of 827 reusable items were donated from 2022 to 2024.
- Activities to exchange used batteries and CDs for gifts are organized.
- Revenue from the approved sale of discarded items from 2022 to 2024 amounted to NT\$2,604,936.

Financial Performance

#### Water Resource Recycling and Zero Wastewater Discharge 6.3 6.5 | GRI 303-1~303-3 | Material Topic E6

The primary source of public water supply in Pingtung County is groundwater. However, since there is no public tap water pipeline passing through the main campus, the only water source on campus is groundwater pumped from legally licensed wells, with an annual average extraction of approximately 220,000 m<sup>3</sup>. In recent years, the University has gradually replaced the main water meters with digital models and established a monitoring system to strengthen water use management. For water resource management, the University has adopted three main strategies — "recharge, water conservation, and reuse"— with the goal of achieving "low energy consumption" and "full recycling and zero discharge."

0. Introduction

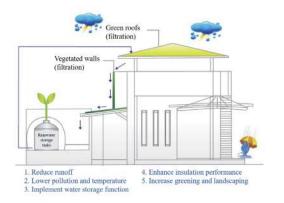
#### Campus Water Consumption

Year	Total water consumption (m³)	Campus population	Per capita water consumption (m³)
2022	2,222,652	11,968	186
2023	2,321,062	11,878	195
2024	2,059,417	11,606	177

<sup>\*</sup> Campus population counts only full-time faculty, staff, and students.

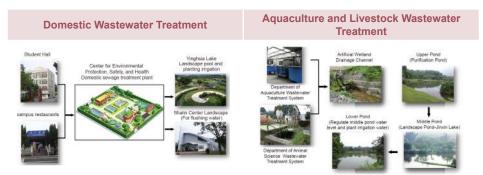
# Rainwater Recycling and Reuse

Located in a tropical monsoon climate zone with concentrated summer rainfall, the University has installed green roofs and rainwater recycling systems. Rooftop runoff is filtered and stored for use in toilet flushing and irrigation, serving as a model system for rainwater reuse and environmental improvement.



#### Multi-Source Wastewater Reuse Measures

- · Domestic wastewater: Treated through microbial oxidation, constructed wetlands, and aquatic plants before flowing into Yingxia Lake for further purification, and is ultimately reused for irrigation and toilet flushing. This saves approximately 180,000 m<sup>3</sup> of secondary water annually, has no impact on surrounding receiving waters, and reduces BOD emissions to external receiving waters by approximately 1,461 kg per year.
- · Aquaculture and livestock wastewater: Wastewater is first processed in a pre-treatment pond before entering Jing Si Lake for further sedimentation and purification, improving water quality and contributing to environmental conservation.



#### **Permeable Pavement and Ground Facilities**

To promote surface runoff infiltration and enhance groundwater recharge on campus, permeable pavement designs have been implemented in multiple areas:



# 4-4 Protection and Restoration of Biodiversity

With its vast campus, NPUST boasts a rich, diverse, and distinctive natural ecosystem — an ideal environment for the nurturing, protection, and restoration of wildlife. The University's renowned departments include Animal Science, Veterinary Medicine, Plant Medicine, and Aquaculture, and it also hosts Taiwan's only Institute of Wildlife Conservation, a Wildlife Rescue Center, and a Biodiversity Research Center, all of which are dedicated to the conservation and restoration of diverse terrestrial, marine, wetland, urban, and rural ecosystems. In recent years, the University has conducted regular biodiversity surveys on campus — including birds, mammals, reptiles, insects, plants, and vegetation coverage — to understand the distribution of species and changes in native and invasive species. The findings serve as a reference for biodiversity conservation efforts.

# Aquatic Ecosystem Protection and Restoration

The campus features a 1,250-ping aguaculture building, a 3-hectare aquaculture practice site (including freshwater and seawater recirculating aquaculture systems and 2 hectares of outdoor ponds, as well as a green-energy photovoltaic aquaculture hatchery greenhouse), a 0.4-hectare aquaculture teaching and research practice site, and a 0.4-hectare teaching practice site. The aquaculture building houses laboratories for aquatic plant biotechnology, fish biology, aquatic physiology and immunology, fish processing and feed, algal physiology and ecology, fish molecular physiology and ecology, aquatic health management, and aquatic reproductive physiology and technology. Additionally, there are four specialized research labs focused on tropical aquatic nutrition and physiology, tropical aquatic health management, tropical aquaculture biotechnology, and animal reproductive technology for aquatic animals. These labs support the development of aquatic preventive medicine and the creation of aquatic health products, such as personal care products derived from economically valuable algae (algae facial soap, algae hair care soap, algae nourishing soap, and algae household soap).

#### Jing Si Lake Dredging and Ecological Conservation

**Green Island Marine Ecosystem Restoration** 





In 2024, 30 faculty members and students participated in the Jing Si Lake dredging and ecological conservation project, capturing and relocating native species after water release to ensure their successful return following the dredging work. Invasive species were also removed to lay the foundation for future ecological restoration of the habitat.



In 2024, the University collaborated with government, industry, and academia to launch the "Green Island Marine Ecosystem Restoration Project." As part of the initiative, native coral reef fish species were released into the wild, including 2 species of clownfish, 8 species of damselfish, and 1 species of boxfish — a total of 11 species and approximately 2,000 fish. The released fry were healthy and adapted well to the local environment, and the restoration work continues under the team's ongoing monitoring.

# **Terrestrial Ecosystem Protection and Restoration**

#### **NPUST Wildlife Rescue Center**

Wildlife Rescue and Rehabilitation	The center covers approximately 2.5 hectares and is equipped with medical and animal care facilities, assisting the government with the rescue and housing of endangered and unverified wild animals. Since 1992, more than 5,000 animals have been taken in. Currently, nearly 1,000 individuals from around 100 protected species — primarily reptiles — are housed. The center also actively builds cooperative mechanisms with countries worldwide to promote ex-situ conservation and international breeding networks.
Public Education and Outreach	Through activities such as open visits, volunteer training, and summer camps, the concepts of wildlife conservation and proper animal care are conveyed, raising public awareness of issues related to the illegal wildlife trade.
Professional Training	The center offers training platforms in wildlife care and veterinary medicine, providing internship opportunities for domestic and international students and relevant institutions to cultivate professional talent for conservation.
Academic Research Collaboration	In addition to conducting independent research, the center collaborates with academic institutions on non-invasive research, advancing the scientific basis of wildlife conservation and captive management.















Winter Wilderness Experience Camp

Animal Christmas Care Packages

Volunteer Training

Wildlife Rescue Training and Exchange Workshops

International Exchange Visits

# ◆ The total number of species housed by the University that have been listed in the IUCN Red List and the National Protected Species List in 2024

Risk of Extinction	Critically Endangered (CR)	Endangered (EN)	Vulnerable (VU)	Near Threatened (NT)	Least Concern (LC)	Total
Total Number of Species	10	14	22	7	31	84







Photo source:Official website of the Wildlife Rescue Center





Year		Endangered and Protected Species		Precious and rare species		Other Conservation- Deserving Species		General wildlife	
Teal	Species	Quantity (head)	Species	Quantity (head)	Species	Quantity (head)	Species	Quantity (head)	Quantity (head)
2022	4	11	16	78	4	4	21	59	259
2023	2	16	17	694	4	9	22	67	87
2024	4	163	20	159	3	3	21	83	81



# 4-5 Environmental Conservation and Disaster Prevention and Mitigation

Taiwan is geologically the result of the collision between the Eurasian Plate and the Philippine Sea Plate, formed by orogenic movement. As a result, fault activity is highly active, making earthquake disasters inevitable. In addition, its location along the frequent paths of typhoons in the western Pacific and exposure to extreme weather events cause frequent geological disasters such as landslides, floods, and debris flows. Therefore, national land conservation, disaster prevention education, and disaster prevention and rescue efforts have become increasingly important. NPUST is the only university in Taiwan that has established several research centers dedicated to natural disaster studies, including the "Soil and Water Conservation Technology Education Center," the "Disaster Prevention Technology Research Center," and the "Complex Sediment Disaster Prevention Research Center." These centers assist the government in reducing the impact and damage caused by disasters, raising community awareness of disaster prevention and rescue, and strengthening community-level disaster prevention, avoidance, and mitigation measures.

#### **Hillside Conservation Education**

To promote soil and water conservation, hillside agriculture, and hillside disaster prevention technology, as well as to facilitate practical technology exchange and cooperation on soil and water conservation in the Asia-Pacific region, NPUST established the "Soil and Water Conservation Technique Education Center" and built the "Soil and Water Conservation Outdoor Classroom" (total area of about 32 hectares, accounting for about 10% of the total campus area). The center conducts research and development on hillside conservation technologies, drainage and slope protection engineering methods, agricultural ponds, water storage systems, irrigation systems, and contour farming to improve farmland soil and water conservation and related professional technologies. It also integrates successful experiences from rural regeneration to support rural development in Southeast Asian countries.

#### Soil and Water Conservation Awareness and Parent-Child Walking Event





Multiple government agencies were invited to participate. Through outdoor education and multi-sensory experiences, the event enhanced public understanding of soil and water conservation and disaster prevention education.

# **Disaster Prevention and Response Planning**

The University's "Disaster Prevention Technology Research Center" serves as a disaster prevention support team for the Pingtung County Government. With funding from the Pingtung County Government, the Nuclear Safety Commission, the National Science and Technology Council, and the National Science and Technology Center for Disaster Reduction, the center has assisted in establishing the "Disaster Prevention Database." It integrates historical disaster maps of Pingtung County, major disaster potential maps, maps of disaster-prone facility locations, evacuation shelters, and nuclear accident evacuation route maps. Using big data and industrial disaster risk analysis, the database provides information for disaster response. In alignment with the national policy of strengthening civil disaster response capabilities, NPUST actively trains community water resource volunteers and disaster prevention personnel and assists towns, townships, and cities in Pingtung County in establishing disaster prevention coordination centers to integrate social resources across regions, achieving the goal of self-rescue and mutual aid during disasters. The University's "Complex Sediment Disaster Prevention Research Center" also conducts year-round academic and technical research on the investigation, assessment, prevention, and planning of complex sediment disasters. It assists local governments such as Pingtung County, Kaohsiung City, and Tainan City in organizing regular disaster prevention awareness campaigns, promoting disaster prevention plans, and training disaster prevention and rescue personnel. In the past three years, the total funding for disaster prevention and rescue-related projects through industry-academiagovernment collaboration has reached nearly NT\$73 million.

Year	Publicity an	d Education	Training of Disaster Prevention Personnel (Number of People)		
	Number of Sessions	Number of Participants	Disaster Relief Volunteers	Water Conservation Volunteers	
2022	56	1,962	40	55	
2023	42	1,893	178	41	
2024	54	1,834	224	37	



Pingtung County Disaster Prevention Specialist Training



Flood Self-Defense Community Field Drills

# 4-6 Sustainable Supply Chain

All procurement processes of the University are carried out in accordance with the "Government Procurement Act" and related regulations to ensure procurement quality and provide guidelines for engineering, financial, and labor procurement operations. Additionally, based on the "Regulations for Government Agencies to Prioritize Green Product Procurement," NPUST implements comprehensive green procurement on campus—from raw material acquisition, product manufacturing, sales, and use to disposal—aiming to save resources and reduce environmental pollution. Prior to procurement, the necessity of the product is considered; during procurement, the environmental impact of the product throughout its life cycle—from raw material acquisition to disposal—is evaluated, and environmentally friendly suppliers are selected. Priority is given to products listed on the Environmental Protection Administration's "Green Living Information Network" with green labels indicating recyclability, low pollution, and resource conservation, to improve campus environmental quality and fulfill the University's responsibility for environmental sustainability.

#### **Sustainable Supply Chain Policy Goals and Achievements**

In promoting a sustainable supply chain, NPUST fully integrates teaching, research, and environmental responsibility, focusing on key elements of a sustainable supply chain (green, transparent, and circular). In achieving a green supply chain, environmental responsibility is incorporated into product design, material sourcing, manufacturing, logistics, and even end-of-life product management. To ensure supply chain transparency, the University proactively discloses information on the origin of goods and other supply chain services. In the circular supply chain, products are disassembled or reduced to raw material forms to achieve recycling benefits and reduce the costs incurred during the recycling process.

To concretely implement a sustainable supply chain, the University refers to the People with Disabilities Rights Protection Act, the Indigenous Peoples Employment Rights Protection Act, the Resource Recycling and Reuse Act, and the Regulations on Prioritizing the Procurement of Products and Services Produced by Welfare Institutions or Sheltered Workshops for Persons with Disabilities. For engineering, financial, and labor procurement operations, procurement contracts must stipulate that suppliers are required to prioritize the employment of persons with disabilities and indigenous workers in accordance with these laws. The University also complies with government policies on green procurement and prioritizes the procurement of products and services produced by welfare institutions or sheltered workshops for persons with disabilities.

#### **Priority Procurement and Green Procurement**

To implement affirmative action and protect the employment rights of persons with disabilities. NPUST prioritizes the procurement of goods and services produced by persons with disabilities. According to the priority procurement regulations, the annual procurement amount for specific goods and services produced by persons with disabilities must account for at least 5% of the total procurement amount of specific items. In order to conserve natural resources, reduce waste generation, and lessen environmental burdens, the University prioritizes the procurement of government-approved environmentally friendly products (those that are recyclable, low-pollution, resource-saving, and meet green label specifications) and meets the government's annual procurement ratio requirements. From 2022 to 2024, the proportion of products and services procured from welfare institutions and sheltered workshops for persons with disabilities exceeded the Ministry of Health and Welfare's 5% requirement and even reached over 10% in 2024. From 2022 to 2024, the green procurement ratio exceeded the Environmental Protection Administration's requirement of 95%, reaching as high as 100% in 2024, demonstrating excellent performance. Additionally, from 2022 to 2024, 100% of the University's procurement in engineering, financial, and labor categories was sourced from local suppliers in Taiwan, fully supporting green office practices (water-saving, energy-saving, and paper-saving).

#### **Amount and Rate of Priority Procurement and Green Procurement**

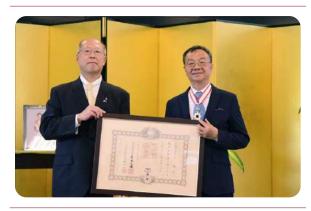
Year	Priority Pr	ocurement	Green Procurement		
	Amount (NT\$)	Rate (%)	Amount (NT\$)	Rate (%)	
2022	232,165	6.25%	17,529,370	99.81%	
2023	393,863	6.38%	13,476,021	99.84%	
2024	543,131	10.46%	19,982,772	100%	

# **Environmental Sustainability — SDGs Highlights**

**Water Resource Management and Environmental** Sustainability

**Honorary Professor Ting Che-Shih Donates the Order** of the Rising Sun, Gold Rays with Neck Ribbon, to His Alma Mater

6.5 9.1 17.16



Honorary Professor Ting Che-Shih has devoted many years to hydraulic engineering research and promoted the "Dachaozhou Artificial Lake Project," which effectively mitigated land subsidence in Pingtung and stabilized water supply during drought periods. His research builds upon the techniques of Japanese hydraulic engineering expert Torii Shinpei and has facilitated Taiwan-Japan collaboration in the field of water resources, for which he was awarded the Order of the Rising Sun, Gold Rays with Neck Ribbon by the Japanese government. In celebration of NPUST's centennial anniversary, he donated the medal to his alma mater to encourage younger generations to continue exploring the possibilities of environmental sustainability.

**Green Energy and Ecological Coexistence** 

Rich Biodiversity Discovered in Chi Mei Green Energy **Park** 





13.3 15.4 15.5



Since 2021, Chi Mei Corporation has commissioned a research team led by Associate Professor Lai Yi-Ling from NPUST's Ph.D. Program in Bioresources to build the "Tree-PV Symbiosis" Green Energy Park in Shanhua, Tainan. Through eco-friendly construction methods, the project successfully preserved more than 300 species of wild animals and 324 species of plants, including 14 endemic species of Taiwan and 8 protected animal species. The NPUST team continues to monitor the park's ecology and plans to create additional habitats, such as floating islands, nesting boxes, and raptor perches, providing a sanctuary for lowland ecosystems in Taiwan.

#### Indigenous Traditional Knowledge and Forest Sustainability

**Kuskus Plant Naming Exhibition** — A Treasure Trove of **Plants** 









A research team from NPUST's Department of Forestry collaborated with the Kuskus Indigenous Community in Mudan Township, Pingtung, to restore ethnobotanical species and promote multi-layered agroforestry practices. The survey revealed that community home gardens contained 332 plant species, including 18 rare plants named after "Kuskus", such as Eupatorium clematideum var. gracillimum and Ardisia kusukuensis. This project not only preserved traditional plant knowledge but also developed locally distinctive products such as natural herbal teas and botanical candles, contributing to the community's sustainable development.



# 5.

# Social Inclusion and Fulfillment of Responsibility (S)

- First in the nation to introduce "Mental Health Leave" (five days per semester), allowing students to acknowledge and address negative emotions while raising awareness of mental health education among faculty and students.
- Nearly NT\$475 million was invested from 2022 to 2024 in systematic improvements to student dormitory facilities, significantly enhancing the quality of student accommodation.
- The qualification rate of on-campus food service providers remained at 100% from the 2021 to 2023 academic years. Additionally, to promote the use of eco-friendly tableware, a mobile points system was introduced to redeem meal vouchers worth NT\$60.
- In 2024, the University was recognized by the Ministry of Education as an "Outstanding Institution in Information and Communication Security Auditing for public agencies and designated non-public institutions under its supervision for 2022–2023."
- Courses related to sustainability accounted for over 50% of total courses offered across the University each year from 2022 to 2024.
- Nearly NT\$2 billion was invested in sustainability-related research from 2022 to 2024, representing about 60% of total annual research funding.
- More than 29,000 participants have taken part in continuing education programs (including specialized agricultural extension and sustainability education experiences) from 2022 to 2024.
- Library resources are open to the public, with more than 785,000 visits recorded from both onand off-campus users between 2022 and 2024.
- The University's educational achievements have been widely recognized by alumni and external stakeholders, receiving over NT\$2.44 billion in donations of cash and equipment between 2022 and 2024.



- In 2022, NPUST and nine other national universities, including National Taiwan University, jointly launched the "Taiwan University Alliance for Sustainable Governance" to advance sustainable development and social responsibility in higher education.
- In 2023, the University established "TSH@NPUST 1.5° C Food and Consumption Transition Hub," Taiwan's seventh TSH hub, focusing on sustainable food production and consumption.
- Signed a memorandum of understanding with 51 farmers' associations in the Kaohsiung-Pingtung region, establishing the largest regional industry-academia collaboration platform for agriculture in southern Taiwan.
- Achieved a 100% approval rate for five proposals submitted under the University Social Responsibility (USR) Program for both the third phase (2023–2024) and the fourth phase (2025–2027).
- According to surveys from the Higher Education Sprout Project, 63% of NPUST faculty members participated in USR projects — significantly higher than the national average (45.35% for public universities and 49.38% for private universities).
- In 2022, NPUST won the First Prize for Overall Performance in the Technical and Vocational Education Category and the Model Award for Ecological Co-prosperity at the 3rd Global Views USR University Social Responsibility Awards.
- In 2023, NPUST received the First Prize for Green Campus and the Model Award for Coexisting Well-Being at the 4th Global Views USR University Social Responsibility Awards.
- In 2024, NPUST received the Model Award for Coexisting Well-Being at the 5th Global Views USR University Social Responsibility Awards.
- In 2024, NPUST won First Place in the Public Technical and Vocational University Category at the CommonWealth University Citizen Awards.
- In 2023, NPUST and the Pingtung County Government jointly established the "Pingtung County Indigenous Long-Term Care Service R&D Center."
- More than 2,700 international students received scholarships, living stipends, and other financial assistance totaling over NT\$976 million between the 2021 and 2023 academic years.
- From 2022 to 2024, the University carried out cross-border industry-academia collaboration projects with several countries, including the United States, France, Germany, and Thailand, with a total project value of approximately NT\$35.75 million.
- Recognized by the Ministry of Education as an Outstanding Institution for Guidance Services for International Students in Higher Education in 2024.

Organizing events,

participating in campus

governance, and serving

as communication

bridges



# 5-1 Fulfilling Social Responsibility and Expanding Sustainability

## Joining Hands with Stakeholders to **Create Mutual Benefits with Society**

The University values the opinions and suggestions of all stakeholders. In addition to making good use of various communication channels to engage with stakeholders and understand their expectations of the University, it also uses more opportunities for dialogue to inform stakeholders about the University's efforts and achievements in various aspects of university social responsibility. Furthermore, based on the nature of each stakeholder, there are different modes of interaction. By fully leveraging campus resources, the University creates mutually beneficial and win-win relationships, playing a crucial role in promoting the virtuous nature of social "harmony."



#### Academic and administrative staff

Poor of the seminating Sustainable Develop -Central backbone of university governance and operations

Participating in university governance and promoting innovation and transformation



#### **Parents**

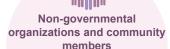
-Supporters of student learning and university development

> Educational partners, supporters, and advisors



NPUST

Talent cultivation and cooperation on research projects



-Partners promoting social engagement and public welfare collaboration

> Cooperation on social welfare, health, and environmental issues



#### **Business**

-Key players in research investment and student internship and employment matching

Industry-academia collaboration, establishment of specialized programs/courses, and talent matching



-Building a sustainable university brand

Supporting university development and providing employment opportunities



-Important partners in the green supply chain

Green procurement and sustainability partners

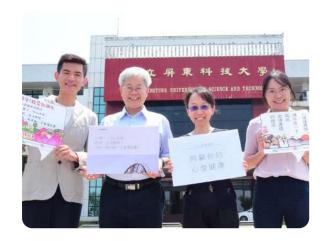


## 5-2 Internal Social Inclusion 3.4 3.6 11.2 11.7 | S101 | Material TopicS1

In terms of internal social inclusion, NPUST focuses on two major approaches: "attracting outstanding talent" and "creating a friendly workplace." It promotes a variety of employee-centered measures to align the University more closely with "sustainable value." With a people-oriented approach, the University implements DEI (Diversity, Equity, Inclusion) policies, values labor relations, and provides many employment opportunities for local residents along with competitive remuneration and benefits. Moreover, the University ensures smooth communication channels and reduces any form of forced or compulsory labor, allowing every staff member to achieve work-life balance. As a result, outstanding talent is more willing to stay, grow with the University, and co-exist, co-integrate, co-thrive, and co-create the future with NPUST.

# Physical and Mental Health Services for Faculty, Staff, and Students

The University has established a Student Counseling Center and a Health and Wellness Section to provide physical and mental health promotion and medical care services for faculty, staff, and students. These services include psychological counseling, daily life support, student accident insurance, disease prevention, health examinations, and disease follow-up, all of which help improve campus health and well-being. Additionally, NPUST became the first university in Taiwan to introduce "Mental Health Leave" (five days per semester), allowing students who need a mental break to rest. This initiative encourages students to acknowledge their negative emotions and strengthens awareness and understanding of mental health education among faculty and students.





"Mental Health Leave" introduced starting from the 2023–2024 academic year

## **Protection of Human Rights on Campus**

## Advancing Gender Equality

NPUST is actively creating a gender-friendly campus by providing gender-inclusive restrooms, breastfeeding (or lactation) rooms, and dedicated parking spaces for childcare, addressing the needs of individuals of different genders and identities.

The University has established multiple regulations and, through educational initiatives and institutional design, promotes diversity and inclusion, eliminates discrimination, and achieves substantive gender equality. It has also created the "Gender Equality Education Committee" website to integrate advocacy resources and regulatory information while offering online complaint filing and real-time support (such as counseling, medical accompaniment, and police assistance), thereby fostering a respectful and inclusive campus environment.



## Zero Tolerance for Campus Bullying

The University upholds the principle of "zero tolerance" and has established the "Campus Bullying Prevention Guidelines," which clearly define prevention measures and relief mechanisms for any verbal, physical, or online attacks that cause physical or mental harm or obstruct learning. It emphasizes preventive education, proper handling, and follow-up care, providing fair and professional investigation and support to ensure that every teacher and student can learn and work in a safe, respectful, and bully-free environment.

Safety Maintenance	Personnel Deployment	Key Task
Campus Safety	15 security guards	24-hour campus patrol and security control at campus entrances.
Campus Security Incidents	17 campus safety center personnel	24-hour shifts responsible for student safety on campus, traffic safety, safety in on-campus dormitories, support for off-campus housing, and overall safety maintenance.
Student Hall Safety	6 security guards/ 2 full-time campus police officers	Ensuring the safety of eight student halls, the internship hotel, and guesthouses.

Vision and Strategies of 1. a Sustainable University

Green University

Sustainability (E)

and Environmental

#### **Campus Safety**

To safeguard the safety of teachers and students on campus, the University has established a Student Affairs and Counseling Section and assigned Campus Security Center personnel to be on duty 24 hours a day. They are responsible for student safety on campus, traffic safety, safety in on-campus student dormitories, and support and safety maintenance for off-campus housing. The University has also established the "Campus Safety and Emergency Response Guidelines," created a "Campus Safety Reporting Network," and produced "Evacuation Route Maps for Various Disasters" and a "Campus Safety Inspection Map."

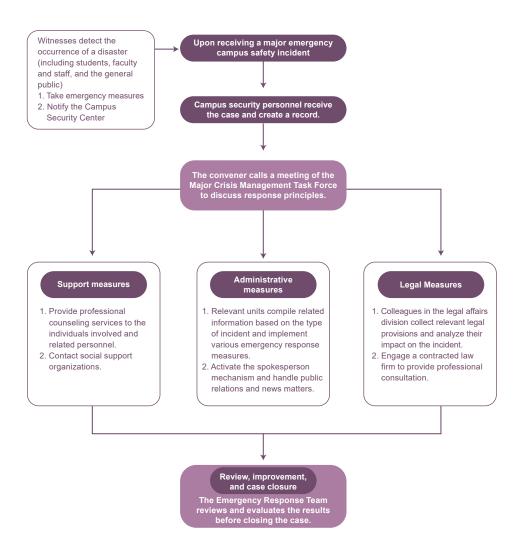
#### ◆ Campus Safety Measures in the Past Three Years

Safety Maintenance	Safety Measures
Campus Safety Incident Coordination and Handling	Coordination and handling of 1,981 incidents
Campus Safety Publicity	75 stories on campus safety 153 sessions/1,540 participants
Traffic Safety Publicity	199 sessions/24,800 participants
Anti-Fraud Publicity	63 stories on campus safety 255 sessions/15,870 participants
No-Smoking and Anti-Drug Publicity	47 sessions/19,697 participants



"Zero Campus Traffic Accidents" creative proposal competition

To effectively respond to emergencies on campus and ensure safety, the University has established the "Major Crisis Incident Response Task Force Guidelines," forming a crisis response task force to integrate resources, plan safety strategies, supervise safety operations, and review and improve processes. In the face of a crisis, management follows the steps of mitigation, preparedness, response, recovery, and follow-up, implementing preventive and response mechanisms in advance.



## **Student Hall Safety**

NPUST has a total of eight student dormitories: three male dormitories — Ren Hall, Shi Hall, and De Hall — and five female dormitories — Zhi Hall, Xin Hall, Yong Hall, Cheng Hall, and Hui Hall. All dormitories have four-person rooms, with a total of 3,237 beds. The occupancy rate remains above 87% each academic year. Each floor of the dormitories is equipped with fire safety equipment and evacuation devices. Additionally, an access control system has been installed at the main entrances to restrict entry of unauthorized individuals, ensuring the safety of residents.

The Student Dormitory Self-Governance Committee holds a Dormitory Leaders Meeting once a week and convenes Dormitory Cadre Orientation/End-of-Term Meetings and Student Dormitory Management Committee Meetings each semester to support dormitory management and activities, fully implementing the spirit of dormitory self-governance.

From 2022 to 2024, the University has invested nearly NT\$47.5 million in planned upgrades of dormitory facilities, improving the internal and external environments year by year and significantly enhancing the quality of student accommodations. The University also actively inspects off-campus housing conditions, establishing an online Rental Platform and Off-Campus Housing Information platform. Properties are recorded and made available to students for reference only after passing written registration review and on-site inspections. Currently, there are 116 listings with safety assessment information, with more than half (a total of 66 properties) willing to participate in government rental subsidy programs.



Off-Campus Landlord and Student Tenants Forum

## **Food Safety and Hygiene**

The University has two large staff and student cafeterias, two convenience stores, a MOS Burger, and a student-run training restaurant on campus. A self-management mechanism for food hygiene has been established, along with the Hygiene and Dietary Committee, to ensure hygienic and safe food services for faculty, staff, and students. The toxicity and health risks of hazardous substances that may arise from the ingredients themselves or during processing, manufacturing, and transportation are actively assessed and managed. Since the 2021 academic year, the compliance rate of all food service providers on campus has remained at 100%. For vendors providing boxed meals, at least one sample of each boxed meal must be retained. For non-boxed meals, at least one sample each of dishes with high water activity and low acidity must be retained for each meal served. The retained food samples must be labeled with the date and meal type, stored below 7° C, and kept refrigerated for 48 hours for inspection purposes.

Since 2023, the University has encouraged faculty, staff, and students to bring their own reusable food containers when purchasing meals. A NT\$60 meal voucher can be redeemed through a mobile points collection system, helping to implement environmental sustainability in daily life.

#### **Campus Food Safety and Hygiene Efforts**

Cafeteria managers, together with personnel from the University's Agricultural and Aquatic Product Inspection and Verification Center, conduct weekly hygiene inspections in cafeterias. These inspections include testing dairy and egg products, frozen desserts, poultry, cooked and sliced meats, seafood, and water used in cafeterias.

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Periodic Food Inspection	Academic year	Total number of inspections (times)	Average number of samples (times)	Compliance rate (%)
	110	69	35	100%
	111	65	34	100%
	112	68	35	100%

- Health and Safety
  Education and Training
- The University undergoes annual food hygiene counseling from the Ministry of Education and requires vendors to rectify any deficiencies.
- 8 hours of kitchen staff hygiene training are arranged each year to raise the hygiene awareness of restaurant personnel.
- The Hygiene and Dietary Committee meets once every semester to improve hygiene and safeguard the health of faculty, staff, and students.

Efforts are also made to reduce food waste and promote the use of environmentally friendly utensils.

Publicize the use of reusable foodware and no waste of food and promote less food waste and low-carbon diet.

#### Occupational Safety and Health GRI403-2~403-8

## Occupational Safety and Health Management System

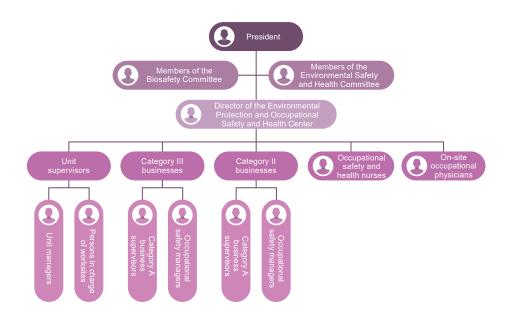
The University follows occupational safety and health policies and has established a comprehensive management system to ensure the safety and health of all faculty, staff, and students. Through four key management processes — planning, implementation, inspection, and continuous improvement — the University reduces potential occupational risks on campus and enhances workplace safety.

#### Center for Environmental Protection, Safety and Health

The University has appointed two Category A occupational safety and health supervisors, two occupational safety and health managers, and two occupational safety and health nurses. Additionally, an occupational medicine specialist is hired to provide on-site services once a month, promoting occupational safety, health, and biosafety management and services for University personnel.

#### **Environmental Protection and Occupational Safety and Health Committee**

The committee convenes once per quarter. In 2024, worker representatives accounted for 35% of the committee's total membership (63%), ensuring that workers can fully participate in, consult on, and communicate matters related to occupational safety and health. Since the implementation of the occupational safety and health management system, as of October 2024, the University has had no records of penalties resulting from reported occupational safety and health concerns.



## Health Promotion and Safety Education

To enhance workers' health awareness, the University provides diverse health promotion and safety education programs to ensure both physical and mental well-being.

#### **Health Examinations and Medical Services**

- Regular health checkups, special health checkups, and radiation worker health examinations are conducted annually, along with irregular disease screening and vaccination activities.
- 2. An occupational medicine specialist provides monthly on-site services, offering personal health consultations and professional guidance.
- 3. A medical equipment and assistive device loan system is in place, allowing employees with short-term needs to apply for free use based on the on-site physician's assessment.

#### **Occupational Safety Education and Training**

Each year, the University conducts seminars and training programs such as "Employee Health Protection Promotion" and "Occupational Safety and Health Management Program" (including the protection of breastfeeding women, prevention of ergonomic hazards, avoidance of workplace overwork, and prevention of workplace bullying).

In accordance with the Occupational Safety and Health Act, new and current employees receive annual safety training. From 2022 to 2024, a total of 1,120 participants have completed such training.



#### Occupational Disease Prevention

Since the University is not part of a hazardous industry, no direct occupational diseases occur, and there have been zero cases of occupational diseases caused by physical or chemical exposure. However, workers in laboratories who may be exposed to specific health hazards are provided with appropriate safety protective equipment.

Regarding the management of work involving specific health hazards, special health



examinations are conducted annually, and a four-level health classification management system is implemented. Personalized health guidance and education are provided to examinees to effectively prevent occupational diseases. The results of the special health examinations from 2022 to 2024 showed no abnormalities related to work.

#### Information Security SV-ED-230a.1~.3

2024 NPUST Sustainability Report

With the increase of artificial intelligence (AI), a large number of Internet of Things (IoT) devices, and the widespread use of cloud technology, global cybersecurity threats have become frequent, significantly increasing information security risks. To ensure campus information security, the University has formulated regulations and policies based on the Ministry of Education's Campus Network Usage Guidelines and the Ministry of Digital Affairs' Digital Service Guidelines and Website Service Management:

"National Pingtung University of Science and Technology Campus Network Usage Regulations" Defines the security of campus network usage and network resources.

"National Pingtung University of Science and Technology Information and Communication Security Management Policy"

Ensures the "confidentiality," "integrity," and "availability" of information, strengthens information security management, and enhances staff awareness of information security.

In 2024, the University was recognized by the Ministry of Education as one of the "Outstanding Agencies in Cybersecurity Audits for Public Institutions and Designated Non-Public Institutions for 2022–2023" (among 60 participating public institutions, only 11 were rated as outstanding), receiving high praise for its effectiveness in promoting information security initiatives.

#### Advocating Information Accessibility and Strengthening Campus Network Services

- In 2022, the University adopted an open-source template system (WordPress) to replace the existing website service and has since conducted regular system updates to improve website management efficiency and security.
- The campus network adopts an SDN architecture, integrating monitoring management and cybersecurity joint defense mechanisms to ensure the stability and security of network services.
- The 802.1x wireless network security authentication mechanism is promoted, offering convenient and secure mobile campus services with one-time setup and automatic authentication.



#### Establishment of an Information Security Management System

To ensure the University's information security management, personal data protection. and digital trust, system implementation and external verification are carried out. External audits of the information security management system are conducted annually to ensure its effectiveness.

	Completed the implementation of the University's Information Security Management System (ISMS).	
2024	Obtained international standard certification for the security management system (ISO/IEC 27001:2022) and passed third-party external verification by the British Standards Institution (BSI).	Certifications were obtained in both 2009 and 2018.
2018	The Office of Academic Affairs, the Personnel Office, and IT-related support service systems have implemented the Personal Information Management System (PIMS) BS10012.	

\*ISMS implementation tasks include: information security training, establishment and review of information asset inventories, risk assessment and handling, dissemination of information security management guidelines, publication of information security documentation, business continuity planning and exercises, internal audits, and management reviews.



Security Management System International Standard Certification (ISO/IEC 27001:2022) Following standardized information security procedures, the University reduces cybersecurity risks and responds promptly to reported incidents. From 2022 to 2024, a total of 39 cybersecurity incidents (including external attacks, unpatched system vulnerabilities, system intrusions, and IoT device vulnerabilities) were recorded. Due to appropriate security measures, there were zero cases of personal data leakage.

#### Countermeasures Against Information Security Impacts

The University established the Information and Communication Security Management Task Force of National Pingtung University of Science and Technology, responsible for planning, auditing, incident response, and training, An annual cybersecurity review meeting is held, and information and communication equipment security is regularly inspected. From 2022 to 2024, the University held 28 cybersecurity training sessions and social engineering exercises, with a total of 1,420 participants.

Vision and Strategies of

## Sustainability Education Courses 4.7 12.8 | S103 | Material Topic S7

0. Introduction

The University is committed to promoting sustainability education by integrating the concept of sustainable development into teaching, research, and campus operations, cultivating professionals with sustainability-oriented thinking.

## Professional Courses × SDGs Concept

#### Offering sustainability-related courses

Departments such as Horticulture, Forestry, Tropical Agriculture, Plant Medicine, Animal Science, Soil and Water Conservation, Agricultural Machinery, Civil Engineering, Environmental Engineering, Agribusiness, and Landscape and Recreation all offer courses such as "Humans and Water." "Air and Pollution." "Soil and Pollution." "Environment and Waste." "Greenhouse Effect and Global Environmental Change," and "Resource Recycling and Utilization," to educate students about environmental values and cultivate their knowledge and capabilities for environmental action. In the past three years, sustainability-related courses have accounted for more than 50% of the total number of courses offered annually at the University.

#### Fill out by facultyCourse-SDGs Relevance

Since the 2020 academic year, the University has encouraged faculty members to indicate the relevance of their courses to the SDGs on the digital learning platform. This information is included as part of the evaluation criteria to promote alignment between teaching and global sustainability issues.

## College of Professionals x Sustainability Courses

#### College of Professionals "Sustainability Development Academy"

To equip students with more knowledge on sustainable development, the College of Professionals has established the "Sustainability Development Academy," which offers a variety of micro-courses for students to freely select and enroll in.

From 2023 to 2024, a total of 183 micro-courses were offered, with 6,711 course completions

## 

• Interdisciplinary Teaching Platform - Net Zero Carbon Inventory **Interdisciplinary Micro-Program** 

#### SDGs-oriented program design

#### Cultivating interdisciplinary professionals











- · Offered to students from the College of Management, College of Agriculture, and College of Professionals without an environmental engineering background.
- Focuses on carbon inventory (ISO 14064-1) and carbon footprint (ISO 14067).
- Aims to train carbon inventory consultants and carbon management specialists.

#### and Local Co-Prosperity

- · Faculty and students assist companies in establishing customized SOPs for carbon inventory.
- Establishes the University's flagship "Carbon Inventory Seed Team" to support companies in ISO 14064-1 and ISO 14067 carbon inventory statement verification and revision.
- The course design is adapted and replicated for local high schools (NPUST Experimental High School) to promote carbon inventory literacy

#### Every step toward the net zero mission is a step toward the shared prosperity of people and land

Carrying forward standards to forge sustainability, advancing together toward widespread carbon literacy









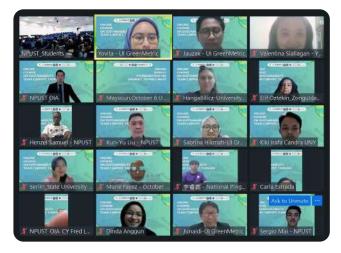


NPUST

## General Education Courses × Sustainability Literacy

#### • Global Higher Education Sustainable Development Online Courses

The University was invited by the UI GreenMetric World University Rankings Secretariat to coorganize the Sustainable University Lecture Series with six other universities. Approximately 70 students from the University enrolled in the course, and more than 80 international students participated online.



## **Sustainability Research**

From 2022 to 2024, a total of 245 sustainability-related academic papers have been published. Over the three-year period, research funding for sustainability-related projects has totaled nearly NT\$2 billion, accounting for approximately 60% of total research funding each year.

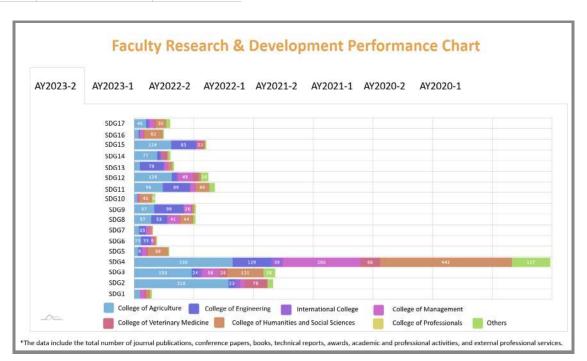
0. Introduction

Vision and Strategies of

Sustainability-Related R&D Funds in

Relate	ber of Sustainability- d Academic Papers in e Past Three Years	Unit: papers
Year	Sustainability-related academic papers	Total academic papers
2022	81	593
2023	91	609
2024	73	519

	Past 3 Year	Unit: NT\$	
Year	Sustainability- Related R&D Funds	Total amount of R&D funds	Proportion of sustainability-related research funding (%)
2022	633,475,538	1,086,229,375	58
2023	625,015,018	1,037,695,439	60
2024	731,430,243	1,196,250,372	61



## **Sharing Sustainability Experience**

NPUST is a board member of the Green University Alliance. Since 2014, it has ranked No. 1 nationwide for 11 consecutive years in the UI GreenMetric World University Rankings, and in 2024, it was ranked No. 2 in Asia and No. 23 globally. To jointly promote sustainable development with other alliance universities, the University proactively discloses its experiences in promoting a sustainable campus on the bilingual "Explore Green NPUST" webpage and the "Sustainability Office" website. These include energy utilization strategies, waste treatment, water resource use, transportation planning, and sustainability environmental education, all of which are extensively shared with the public.

In addition, in December 2024, the University was invited by the Accreditation Council for Chinese Business Education (ACCBE) to deliver a speech on "How Universities Align Their Development Strategies with the UN SDGs," sharing the process of formulating development strategies to promote sustainability, planning efforts, and experiences overcoming challenges during implementation.

#### 2024 APEC Industry-Academia Exemplary Workshop





The Ministry of Education also invited the University to co-host the "2024 APEC Industry-Academia Exemplary Workshop," which focused on sustainable development and interdisciplinary talent cultivation. Through site visits, participants learned about the University's outstanding achievements in digital sustainability, interdisciplinary talent cultivation, smart agriculture, and industry-academia collaboration, showcasing the strength of technical and vocational education in advancing sustainability.

Vision and Strategies of 1. a Sustainable University

Tropical and Subtropical Orchard (Smart Farm)

Soil and Water Conservation Outdoor Classroom

## 5-3 External Social Inclusion

## **Campus Resource Sharing**

awareness.

#### Extension Education

The "Office of Extension Education" of the University not only cultivates highly skilled and practical technological professionals to improve production and service technologies in agriculture, industry, and commerce, but also serves the community, accelerates the cultivation of key talents in these sectors, and promotes industrial upgrading. Its operations encompass three key functions: experimental research, extension services, and educational promotion, using extension education as a means to enhance social inclusion.





## Library and Exhibition Hall

To fulfill university social responsibility, the University opens its facilities (totaling approximately 5,600 ping) and shares its library collection resources with the public. It also collaborates with domestic colleges and universities through the Kaohsiung–Pingtung Interlibrary Loan and Return E-System to expand the collection. In addition, the University actively enhances the "soft power" of the Library and Exhibition Hall by purchasing new books every month, enabling faculty and students in the southernmost region of the country to enjoy reading resources on par with those in metropolitan areas.

#### **Library Public Access Statistics**

Year	Number of library visitors		Number of library visitors Number of loans		Number of i	tems borrowed
	On-Campus	External visitors	On-Campus	External visitors	On-Campus	External visitors
2022	221,567	90,499	17,392	614	40,680	1,518
2023	167,686	65,210	16,244	990	36,940	2,766
2024	144,288	96,193	14,339	1,084	31,795	3,456

As of the end of 2024, the University's collection includes 347,110 Chinese and Japanese books (including bound periodicals), 84,651 Western books (including bound periodicals), 65 electronic databases, 82,179 electronic journals, 1,361,576 e-books, 14,233 digital theses, and 12,388 audiovisual materials. In response to low-carbon sustainability policies, the University has gradually reduced the procurement of printed books and increased the acquisition of e-books. It has also promoted digitalization of the collection by participating in electronic resource-sharing alliances, providing online access to faculty, students, and the public. The Library and Exhibition Hall houses Official Facebook page and Official Instagram account, which continually update reading and arts events.

#### Signing Ceremony for the Digitization of Historical Works with the National Central Library





The University preserves a century's worth of agricultural and livestock historical materials, including precious documents such as "The History of Cattle Plague in Taiwan." A total of 104 old books, graduation albums, and historical photographs will be progressively made available on the "Taiwan Memory" platform, promoting cultural heritage and academic research, and demonstrating contributions to historical preservation and knowledge sharing.

In collaboration with related university departments, the University jointly organizes large-scale reading events such as the "South Wind Reading Festival" and the "Jingsi Lake Literature Festival." These feature reading activities, lectures, artistic engagements, and literary creation events, and are structured around four main themes: [Creation & Appreciation], [Reading & Sharing], [Image & Arts], and [Encouragement & Participation]. Guided by the SDGs, these initiatives aim to enhance participants' competencies, provide a dedicated literary creation platform for students, inspire independent reading and the publication of illustrated works, foster collaborative learning among students, and share quality educational opportunities with neighboring and partner high schools. These efforts also improve community reading literacy and realize the goal of campus-society collaborative learning for sustainability.

#### Jingsi Lake Literature Festival

Poet Wu Sheng returns to his alma mater to share "South Wind Youth"

Jingsi Lake Literature Award Exhibition





#### **Art Exhibitions**

"Century of Heritage, Glorious Future – Wu Yu-ling and NPUST Faculty-Student Collaborative Weaving Exhibition"

"Treasures Reunited: Classic Collections Reimagined" Permanent Exhibition





#### **Connecting with Alumni**

The University established the "Alumni Service Center" to integrate alumni resources and strengthen alumni connections. Through scholarship establishment, recommendation of distinguished alumni, sponsorship of campus events, and organization of alumni gatherings, the University fosters alumni camaraderie. It also offers exclusive benefits such as shopping discounts, access to sports facilities, accommodation, and veterinary hospital services as a token of appreciation for alumni support.

To promote industry collaboration with alumni, the Alumni Association and departmental alumni offices jointly relocated to the 3rd floor of the Library and Exhibition Hall in 2021, providing a dedicated space for communication and events. The Alumni Association also established the "Distinguished Alumni Selection Committee," which annually recommends and honors alumni who have made significant contributions to the University and society. From 2022 to 2024, a total of 90 Distinguished Alumni and 25 Outstanding Young Alumni were recognized for their achievements and to inspire future generations.



Distinguished Alumni Introduction



Outstanding Young Alumni Introduction

The University actively engages with alumni enterprises, inviting alumni executives to campus for mentorship and to serve as corporate mentors in the "Career Competency Lecture Series," helping students enhance professional skills and expand career pathways. Within three years, the University held 61 career lectures, facilitating talent matching between alumni enterprises and graduates, with over 2,500 participants.

The primary mission of a university is talent cultivation. Disadvantaged students are able to pursue education through financial aid systems, while outstanding students are further motivated through award mechanisms. The University actively raises educational resources from various channels to ensure that all students can pursue their studies without concern, challenge themselves in campus life, and achieve higher levels of performance. The Friends of NPUST embody boundless love, continuously spreading kindness and beauty through their philanthropy while supporting the University's educational mission.

# ◆ Statistics of Donations from Alumni and External Sources in the Past Three Years

Year	Cash and equipment donations (NT\$)
2022	12,423,787
2023	13,940,971
2024	222,194,411
Total	248,559,169



Outstanding Alumni Awards at the Centennial Celebration



Career Seminar on Vegetation Engineering (Department of Soil and Water Conservation)

As the world faces a food crisis, NPUST, as a university focused on technological agriculture and ecological industries, has cultivated exceptional talents who return to their home countries to address local challenges, thereby enhancing the University's global reputation.



NPUST alumnus Siao Te-Tsai from Malaysia received the "Global Outstanding Overseas Chinese Alumni Award" from the Overseas Community Affairs Council in 2023



Distinguished Alumnus – Lai Cheng-Kuang, CEO of BioLegend
Taiwan Inc

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## Distinguished Alumni and Sustainable Impact

2024 NPUST Sustainability Report

#### Biodiversity Conservation and Ecological Sustainability (SDG 11, SDG 15)

Alumna Chi Meng-Jou (Department of Veterinary Medicine, Class of 2010)

**Alumnus Chang Yung-An** (Department of Plant Medicine, Class of 2015) Alumna Chang Mei-Hui (EMBA, Class of 2018)



They founded the Taiwan WildOne Wildlife Conservation Association, actively promoting wildlife conservation in Taiwan.

Received the "2024 Forestry and Nature Conservation Meritorious

Received the "9th National Environmental Education Award - Group Category, Excellence Award"

Source: Forestry and Nature Conservation Agency, Ministry of Agriculture, Ministry of Environment



Currently serving as a forest ranger at the Kurama Mountain Workstation, they leverage their background in plant medicine and tree-climbing skills to document forest ecology from different heights, providing the research team with valuable forest ecological data.

Source: CNA



In Mudan Township, they promote cultural and ecological tourism and introduces under-forest economic industries such as shiitake mushroom cultivation on logs, mountain chicken farming, and beekeeping, creating a sustainable industrial model for the local community.

Source: China Times Online

#### Agricultural and Fishery Innovation and Industrial Upgrading - SDG 2, SDG 12, SDG 15

Alumna Huang Ya-Ling (Department of Agronomy, Class of 1990; Doctoral Program, Class of 2020)

Chen Guan-Bo (Department of Veterinary Medicine, Class of 2016)



Chang Chia-Hung (Department of Horticultural Production, Class of 2004)



Currently serving as Associate Researcher at the Kaohsiung District Agricultural Research and Extension Station, Ministry of Agriculture, focusing on agricultural technology innovation.

Recipient of the "Top 10 Outstanding Agricultural Experts in Taiwan." Source: Official website of the Presidential Office, Republic of China



Founder of Full of Frogs, which breeds horned frogs and tree frogs in captivity to replace wild capture, successfully entering the European and American markets and advancing global amphibian conservation.

Selected for the "7th Top 100 Young Farmers Guidance List."

Source: Business Today



Leader of Taii Agricultural Co., Ltd., dedicated to agricultural technology innovation and environmentally friendly production.

Recipient of the "9th National Environmental Education Award -Excellence Award, Private Enterprise Category."

Source: Ministry of Environment

#### Partnership Alliances and Social Impact GRI2-28

## Networked Partnership Alliances

- · Joined the "Taiwan Green University Alliance" in 2014, implementing the Talloires Declaration and jointly striving for resources to promote green universities.
- · Joined the "World Green University Global Presidium" in 2017, linking academic and practical exchanges between Taiwan and the international green university sector to fulfill the social responsibility of higher education in Taiwan.
- · Became a permanent member of the "International Partnership for the Satoyama Initiative (IPSI)" under the United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS) in 2018, participating in global Satoyama and Satoumi environmental protection efforts to promote harmonious coexistence between society and nature.
- · Signed a "Joint Cultivation Agreement" with eight universities in 2021 to promote USR programs across institutions, gathering significant new momentum for USR.
- In 2022, jointly initiated the establishment of "Taiwan University Alliance for Sustainable Governance (TUASG)" with nine universities to jointly shoulder the responsibilities of university sustainable development and social responsibility, advancing toward the goals of sustainable development.
- In 2023, in order to explore the transformation pathways of the food system, the seventh sustainability hub in Taiwan — "TSH@NPUST 1.5° C Food and Consumption Transition Hub" — was established, focusing on the sustainable production and consumption of food in Taiwan.

## Expanding Social Impact

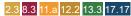
NPUST responds to university social responsibility through sustainable development and plays an important role in generating social impact. The University serves as a government think tank for sustainability innovation strategies, a business innovation consultant for corporate ESG, and an impact advisor that coexists and thrives alongside communities and nonprofit organizations. As a comprehensive university of science and technology, in order to strengthen the connection and cooperation between universities and local regions, NPUST not only collaborates with government and non-governmental organizations to offer various types of educational programs, cultivate local talent, and promote regional revitalization, but also works hand in hand with the government and enterprises to develop high-quality agricultural processed products and assist farmers in increasing their income. In addition, many faculty members have long been deeply engaged in research on animals, plants, environmental protection, vaccine development, and conservation. They identify local ecological issues, organize various training programs, transform the sustainability mindset of local communities, and advocate for legal reforms, thereby making active contributions to the common good of society.

#### ◆ List of NPUST Membership Associations

Other Important Partnership Alliances	Qualifications
Academia-Industry Consortium for Agricultural Biotechnology Park	Permanent
Academia-Industry Consortium for Southern Taiwan Science Park	Permanent
Testing Center for Technological and Vocational Education	Permanent
Committee of Recruitment Policy for Technological Colleges and Universities	Permanent
Taiwan Academia-Industry Consortium	Permanent
Association of National Universities of Taiwan	Permanent
Association of National Universities of Science and Technology of Taiwan	Permanent
Association of Agricultural Education of ROC	Permanent
Pingtung County Science Park Consultation Committee	Consultation Committee Member

Signing of Memorandum of Cooperation with Farmers' Associations in the Kaohsiung-**Pingtung Region** 

**Regional Agricultural Promotion Liaison Meeting and General Managers' Gathering of Farmers' Associations** 





A total of 51 farmers' associations in the Kaohsiung-Pingtung region and other areas jointly signed a memorandum of cooperation to strengthen interaction and exchanges among industry, government, and academia, promote the development of regional agricultural cooperation, and support young farmers returning to their hometowns to develop their careers.



This meeting shared and discussed implementation experiences or suggestions regarding agricultural promotion and guidance policies, further strengthening industrygovernment-academia exchanges and promoting regional agricultural cooperation and development.



#### USR in Collaboration with CSR

NPUST adopts a diverse approach to implementing university social responsibility. Whether through professional research in agriculture and ecology, technology transfer and industrial upgrading for corporations, or participation in community revitalization services, its work is highly socially beneficial. In particular, in recent years. the University has achieved remarkable results in agricultural and biomedical technology research and has actively collaborated with enterprises in industry-academia partnerships. These efforts have assisted numerous companies (including suppliers) in their industrial transformation, extending the power of sustainable development outward and earning widespread recognition.

From 2022 to 2024, the University signed strategic alliances with more than 100 well-known enterprises, including Merry Yard Group, Hung Poo Real Estate Development Co., Ltd., China Motor Corporation, and CECI Engineering Consultants, Inc. Taiwan. Through industry-academia cooperation, these alliances have combined strengths to achieve mutually beneficial outcomes.

#### ◆ Statistics of Strategic Alliances Signed with **External Organizations**

Year/Item	Universities	Medical institutions	Enterprises	Others
2022	27	3	44	7
2023	24	5	50	14
2024	14	1	18	27

<sup>\*</sup>Others include government agencies, foundations, associations, and other organizations.



USR Achievement Exhibition and Joint Practice of Social Responsibility with Local Communities

#### Social Responsibility and Local Coexistence

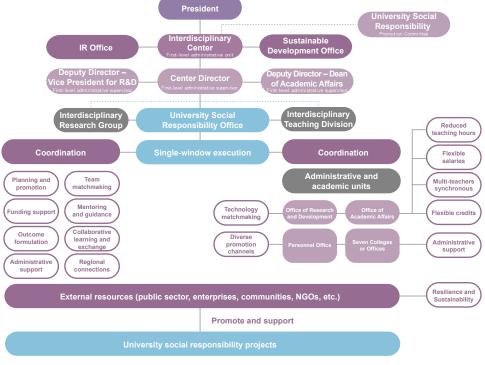
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NPUST focuses on social development issues. In 2018, it established "Interdisciplinary Features Development Center" to coordinate the promotion of USR (University Social Responsibility) projects, and under it set up the "Office for the Promotion of University Social Responsibility" to implement the goals and strategies of USR. In addition, the "University Social Responsibility Promotion Committee" was established to formulate implementation measures and performance indicators.

Since NPUST began implementing the Ministry of Education's USR Practice Projects in 2018, it has encouraged faculty and students to actively participate in these initiatives, accompany local communities over the long term, and cultivate talent. This allows faculty and students to go beyond academic research and engage deeply with local issues in Pingtung, showing care for the region and working to solve its problems. Looking ahead, the University hopes to continue playing the role of a local think tank, fostering positive interaction characterized by coexistence, mutual prosperity, and shared benefit with local communities, while also cultivating students' abilities for independent thinking and social engagement.



All Five Projects in the Third Phase of the Ministry of Education USR Program Approved



# Promotion of University Social Responsibility Projects

Since 2018, under various scales of USR project implementation, NPUST has carried out a total of 135 pilot and micro-seed projects from 2018 to 2024, and a total of 48 Ministry of Education Practice Projects and USR Hub projects from 2018 to 2024. Over the past seven years, a total of 338 faculty members and 3,369 students have participated in these projects. The program's scope has expanded from the original 10 townships in Pingtung County to 27 townships and has further extended to Kaohsiung and Taitung. In 2023-2024, USR Hub projects even began international collaborations, establishing partnerships in Thailand, Vietnam, and Malaysia, thereby extending the reach of USR to the global stage.



The Kanadina Clean River Seed Advocacy Project leads students to provide guidance to livestock farmers.



Digital application teaching courses for disadvantaged students in rural areas.



Vision and Strategies of 1. a Sustainable University

The Elderly and Young Cohabitation Project assists elderly and young groups with joint learning.



Guidance for cacao farmers in Thailand.

## Campus Service Clubs Engaging with Society

Social services require the participation and continuation of youth. Students from various departments use their professional expertise and characteristics to serve and learn through organizing activities. They also provide services to communities and rural areas during holidays or summer and winter breaks, contributing to society. From 2022 to 2024, there were a total of 24 service-oriented clubs, carrying out 185 service missions and serving more than 3,000 people.

Green University

and Environmental Sustainability (E)



NPUST Social Work Volunteer Team

#### Statistics on Student Club Activities in Past 3 Years

Year	Number of service- oriented clubs	Number of Activities	Number of Recipients
2022	6	53	858
2023	8	73	1,252
2024	10	59	920







NPUST TWINI Club

#### 2024 NPUST Sustainability Report

## ■ Deep Economy — Deepening Understory Economy, Ecotourism, and Talent Cultivation in Agroforestry Carbon Sequestration



Due to intensive agriculture and conventional farming methods, biodiversity in Lishan environments has declined, resulting in the loss of original ecosystem functions. Additionally, rural communities' single-minded focus on production-oriented values necessitates location-appropriate regional revitalization strategies. The NPUST team proposed agroforestry and ecotourism as key solutions, helping Lishan communities develop sixth-sector (integrated primary, secondary, and tertiary) products, services, and activities with market differentiation and competitiveness, thereby establishing a locally rooted economy. From 2018 to 2024, the annual output value of understory economy directly guided by the NPUST team reached approximately NT\$6 million. The number of community ecotourism itineraries exceeded 100, with annual ecotourism visitors reaching 100,000 and an annual output value of over NT\$70 million. The team also established 58 understory economy teaching sites, conducted 6,064 on-site teaching sessions, and cultivated 758 community talents. Technical systems for understory cultivation, such as understory beekeeping and shiitake mushroom log cultivation, were established. Additionally, NPUST linked 65 communities across Taiwan to form the Taiwan Ecotourism and Regional Revitalization Alliance.



Collaborating with the Gaoshi Community in Mudan Township to rebuild the shiitake mushroom log industry



Promoting agroforestry home gardens in the Shen Shan Tribe in Wutai Township



Promoting ecotourism through the Deep Economy Project



Supporting the development of understory beekeeping technologies in Wutai and Mudan Townships



Ecotourism and DMO regional axis operations — Liugui Gandan Small Farmers' Market



Sharing the Deep Economy at Shengli Star Village Yongsheng No. 5

Bookstore in Pingtung

# ■ Innovation in Probiotic Rice Cultivation Technology — SPRI Water-Saving and Carbon-Reduction Farming Method and Sustainable Industry Chain Application 2.4 6.4 12.5 13.3 17.17

In light of the increasingly serious issues of climate change and water resource shortages in recent years, and considering that agricultural water accounts for 70% of the total annual water usage and irrigation accounts for 90% of agricultural water, with rice irrigation being the largest proportion, the University's technical team collaborated with the Ministry of Agriculture and the Kaohsiung-Pingtung Irrigation Association to develop the System of Probiotic and Rice Intensification (SPRI). Compared with conventional farming methods, SPRI can save 30% of water, reduce fertilizer usage by 50%, and increase yield by 20%. The addition of soil probiotics and the use of organic fertilizers specifically for rice cultivation enhance microbial diversity in the soil, reducing the number of fertilizer applications required, lowering labor costs, and achieving water saving, fertilizer reduction, pesticide reduction, labor saving, and carbon emission reduction.



Unlike conventional methods that plant 8–10 seedlings, SPRI uses a transplanting method of 3–5 seedlings. Probiotics are added to the irrigation water to enhance soil microbial activity, and intermittent irrigation — applying 3 cm of water after 2 to 3 days of drying — trains the rice to adapt to harder and drier fields. This forces the roots to grow longer and anchor deeply into the soil, strengthening them to withstand wind damage. Fermentation-driven microbial activity increases soil porosity, promotes soil respiration, and complements the strong root system. Research shows that adding probiotic organic fertilizer to rice irrigation

2024 NPUST Sustainability Report



Planting Low-Carbon Rice with Full Grains

can reduce carbon emissions by approximately 5.3 metric tons per hectare of cultivated paddy field. The experimental results have been published in the international journal Water International. In addition, the University independently developed a UAV-based multispectral (infrares) chlorophyll estimation model to improve field management efficiency. By equipping aerial drones with four lenses, including near- and far-infrared, and using 12 different vegetation indices, the system calculates the chlorophyll content of rice, effectively monitoring crop growth quality and field conditions. Currently, this farming method has expanded beyond Kaohsiung, Pingtung, and Tainan to the Guanshan area of Taitung.

Furthermore, through the two main approaches of "expanding low-carbon dining" and "promoting a circular economy," the University has collaborated with corporations on CSR initiatives. Using SPRI technology, it partnered with Uni-President 7-ELEVEN, MOS Burger, and Yeedon Enterprise Co., Ltd. (SANHO RICE) to launch popular low-carbon products such as rice balls and rice burgers. This serves as a classic example of how academia and industry can work together to implement social responsibility and commercialize technology.



Collaboration with Convenience Stores: Shih An Farm Soft-Boiled Egg Rice Ball



Low-Carbon Probiotic Rice Produced by the University

#### Platinum Society and Health Care for the Elderly

In 2024, the proportion of the elderly population in Pingtung County reached 20.14%, marking its transition into a super-aged society. To transform Pingtung into an "age-friendly city" — a city without barriers, where the elderly can live safely, enjoy aging, and stay healthy — the University has long collaborated with the Pingtung County Government to conduct comprehensive needs analyses and care services for older adults in areas such as food, clothing, housing, transportation, education, recreation, and mobility, aiming to delay local aging and promote health while creating an age-friendly environment. The University's Sustainable Health Care Center has long collaborated with the Pingtung County Department of Health and the Pingtung County Department of Social Affairs on a series of "age-friendly" events and seminars (forums). Over the past three years, it has organized 230 sessions with 7,500 participants, raising public awareness and understanding of older adults, and offering a diverse range of activities suitable for their participation, enabling them to integrate more actively into society.

## Promoting Health and Well-Being

"Imagination and Exploration of Holistic Care for the Next Generation of Older Adults" Seminar



Senior rights advocacy forums and dialogue platforms for practitioners, experts, and scholars to discuss the correct direction for holistic care in a super-aged society.

Intergenerational Cohesion and Learning Between Youth and Seniors

"Community Dementia Education and Outreach" Activities



These initiatives enable the University to serve as an extension of the community and establish strong local connections.



In response to the government's dementia-friendly promotion policy, they aim to raise young people's awareness of dementia while spreading care and support.

#### Cultivating Health Care Professionals and Training Volunteers

- The University continues to offer the "Caregiver Training Program," with a cumulative total of 126 students having obtained completion certificates by 2024.
- The "Long-Term Care Module Program Cross-Disciplinary Micro Program in Home Care Services" is promoted in collaboration with field experts in the Kaohsiung-Pingtung area, with 352 participants having taken the course by 2024.
- In cooperation with local communities, board game workshops are used as a form of volunteer training, bringing activities into communities and serving a cumulative total of 1,813 participants.
- Educational training for senior service front-line personnel has been held to improve service friendliness, with 424 participants having completed the training by 2024.
- Seed instructors and volunteers for dementia-friendly community advocacy have also been trained, with 298 people having completed training by 2024.

## Research Projects and Promotion of Health Care

- In recent years, the University has undertaken multiple commissioned projects from the Pingtung County Government and Long-Term Care Management Center, conducting research and providing guidance on community-based long-term care, elder services, and age-friendly initiatives, with cumulative project funding exceeding NT\$15 million.
- The research covers areas including improving the quality of community integrated service centers, support for family caregivers, promotion of age-friendly communities, and studies on the current status of age-friendly housing for older adults.

#### Promotion of Friendly Care Models in Indigenous Communities

- Long-term care service stations have been established in all nine Indigenous townships of Pingtung County, and service capacity continues to expand.
- The "Action Research on the Promotion of Friendly Care Models in Indigenous Communities" project was implemented to optimize long-term care services and training under the concept of cultural safety.
- The "Pingtung County Indigenous Peoples Long-Term Care Service Research and Development Center" was established to build an information platform for Indigenous long-term care, focusing on the needs and service experiences of Indigenous people in northern Pingtung, thereby enhancing local well-being.

#### Response to Animal and Plant Disease Risks

Unlike other universities, NPUST, in order to study animal and plant disease risks and propose corresponding countermeasures, has specially established units such as the Department of Animal Science, Department of Plant Medicine, Department of Aquaculture, Department of Biotechnology, Department of Veterinary Medicine, Graduate Institute of Animal Vaccine Technology, Institute of Wildlife Conservation, and Working Dog Training Center. The University is dedicated to (1) strengthening research on epidemiology, pathology, immunology, and ecology of various animal and plant diseases, and improving animal and plant epidemic prevention and guarantine technologies; (2) developing diagnostic and control technologies for emerging plant diseases, reagents for detecting residues in livestock and poultry products, and diagnostic identification of animal and plant diseases and pests, as well as conducting pesticide risk assessments and research on environmental hormones, providing technical support for animal and plant epidemic prevention and quarantine, and carrying out plant disease and pest prevention work; and (3) applying biotechnology to improve the quality and accuracy of veterinary drug testing, and developing local, multivalent, multi-effective combination vaccines and genetic engineering vaccines to promote the development of the animal vaccine industry.

Conducted a "General Education Course on African Swine Fever" in Paraguay

Research and development of Detection Dogs for Fusarium Wilt of Banana Tropical Race 4 (Foc TR4)



Professor Lin Chao-Nan from the Department of Veterinary Medicine was invited to share experiences on "The Current Status of Taiwan's Swine Industry and the Global Situation of African Swine Fever," promoting veterinary education and swine disease prevention cooperation between Taiwan and Paraguay, and deepening international collaboration and professional influence.



The University collaborated with the Organismo Internacional Regional de Sanidad Agropecuaria (OIRSA) and the Banana Research Institute to train detection dogs for Foc TR4, enhancing health monitoring in banana production areas and providing innovative plant quarantine strategies.

## Graduate Institute of Animal Vaccine Technology

The University's Graduate Institute of Animal Vaccine Technology is the first vaccine and adjuvant technology research institute in Taiwan. "Vaccine immunity" is the best strategy for preventing and controlling animal diseases and reducing the overuse of antibiotics, which inevitably increases the demand for biologics. To align with government policies and industry needs, the University established the Animal Vaccine and Adjuvant Technology Research and Development Center and the Graduate Institute of Animal Vaccine Technology with support from the Ministry of Education — the only animal vaccine research institute among universities in Taiwan — and founded the Animal Vaccine Pilot Plant. The University is dedicated to developing key technologies, patents, and technology transfers for the animal vaccine and adjuvant industry, improving industrial technology, and forming an industry-academia alliance with the animal vaccine industry cluster in the Pingtung Agricultural Biotechnology Park. Furthermore, the production of animal vaccine adjuvants is an important sector in the domestic agricultural and health biotechnology industries. The added value of the animal vaccine industry is also a crucial component of production technology for livestock, poultry, and aquatic animals, with significant social value in safeguarding human and animal health and ensuring consumer confidence.

#### 2024 Immunology Technology and Vaccine Development Industry Forum



The Immunology Technology and Vaccine Development Industry Forum focused on research technology and future development, promoting academic exchange and deepening cooperation. It stimulated opportunities in animal vaccine research and industry prospects, realizing the dual goals of advancing animal vaccine R&D and economic prosperity.

## 2024 NPUST Sustainability Report

# 5-4 International Exchange and Global Partnerships

NPUST has long been promoting international exchange. As of the end of 2024, the University's sister schools span five continents and 50 countries, totaling 299 universities. Currently, international students from 43 countries are enrolled in various departments, forming a small global village on campus. After adopting advanced technologies from countries such as Europe, the United States, Japan, and South Korea, NPUST modifies these technologies to suit Taiwan's environment and then exports the distinctive results of its R&D to sister schools for mutual exchange. It even extends these technologies, in line with Taiwan's diplomatic policies, to New Southbound countries, diplomatic allies, and non-diplomatic developing countries, making significant contributions to local agricultural technology development, improving residents' livelihoods, and assisting global agricultural and food sustainability.



Statistics on the Number of International Students	Unit: persons
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Academic year	Overseas compatriot students	Foreign students	The Overseas Youth Vocational Training School students	Foreign internship students	Foreign exchange students	Mandarin language students
2021	196	289	44	0	0	5
2022	198	259	24	39	13	5
2023	181	228	11	41	5	11

# Collaborating with the Public Sector to Promote Educational Diplomacy

Since the 1960s, NPUST has sent its first agricultural mission teams abroad to promote agricultural technologies on behalf of Taiwan. To this day, in line with the Ministry of Education's "New Southbound Talent Development Program," NPUST has continuously offered the "New Southbound Industry-Academia Program" for many years, recruiting students from Nepal, Indonesia, India, and other Southeast Asian countries, with its implementation results receiving widespread recognition. In addition, the Overseas Community Affairs Council has jointly promoted the "High-Tech Talent Training Base" program with NPUST, establishing the "Southeast Asia High-Tech Agricultural Talent Training Base" to expand the recruitment of overseas compatriot students to study in Taiwan, helping more ethnic Chinese youths return to Taiwan to receive training in agricultural production technology, quality management, R&D, and other skills. In recent years, NPUST has also cooperated with the Ministry of Foreign Affairs to organize the "African Elite Talent Short-Term Training Program," recruiting entrepreneurs, farm owners, and agricultural officials from eight countries including the Kingdom of Eswatini, Tanzania, Kenya, and the Republic of South Africa. This program assists allied nations in improving agricultural technology and production management, and, in line with the trends in global sustainable agriculture and animal husbandry development, focuses its curriculum on eco-friendly farming practices and the practical needs and technologies of African agriculture and livestock industries.



African Elite Talent Short-Term Training Program





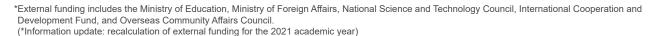
New Southbound Elite Talent Development Program



#### Assistance and Guidance for International Students GRI 2-4

International exchange in higher education involves various aspects, including teaching, resources, innovation, and talent cultivation. In response to new trends in educational diplomacy, NPUST has actively undertaken international responsibilities. Some of the University's international students come from disadvantaged groups in developing countries. To support the underprivileged and share love, NPUST provides generous scholarships for international students to apply for, helping foreign students study with peace of mind. During the 2021–2023 academic years, a total of 2,723 international students received financial assistance in the form of scholarships, tuition and fees, accommodation subsidies, or living allowances, with the total amount reaching approximately NT\$107.89 million.

S	tatistics on the Type of Scholarships a	nd Grants	for Internationa	l Students	and the Numbe	r of Recip	ients
Fund	Academic year	2021		2022		2023	
Source	Type of Scholarship/Grant	Persons	Amount (NT\$)	Persons	Amount (NT\$)	Persons	Amount (NT\$)
	International Student Study Scholarship/ Grant	617	3,310,000	575	3,236,000	540	3,046,000
University funding	Scholarship for Outstanding Overseas Chinese Students	47	1,207,415	39	991,520	35	958,387
	Scholarship/Grant for Outstanding International PhD Students	194	1,552,000	184	1,472,000	142	1,152,000
External fun	dina	119	30 114 064	117	30 745 058	114	30 112 269





Recognized by the Ministry of Education as an Outstanding Institution for Guidance Services for International Students in Higher Education in 2024

In addition to promoting international academic exchange and cooperation, NPUST's Office of International Affairs also provides comprehensive care and support for overseas students, creating a high-quality and comfortable learning environment for those who come from afar to study.

Furthermore, to enhance international cultural exchange, the University holds various cultural events and lectures every year to increase interaction between overseas and local students, creating a uniquely internationalized environment at NPUST. Through activities such as cuisine, games, and traditional dance performances, participants can experience diverse foreign cultures, showcasing the University's multicultural and inclusive campus atmosphere.

2024 International Culture Day



Overseas students set up cultural experience booths, offering foreign cuisine and beverages combined with traditional Taiwanese dishes to create a relaxed and localized international environment.

# International Students' Lunar New Year Celebration and Outdoor Activities



International students learn auspicious Lunar New Year greetings in Mandarin, gather to welcome the Year of the Dragon, and experience Taiwan's festive culture. Through the language-learning process, they gain a deeper understanding of Chinese culture.

#### Diwali Festival 2023



The Indian Students Association organized a "Diwali Festival," combining a lighting ceremony and a traditional costume show to showcase the beauty of Indian culture, attracting students from many countries to participate.

#### **Indonesian Cultural Festival 2024**

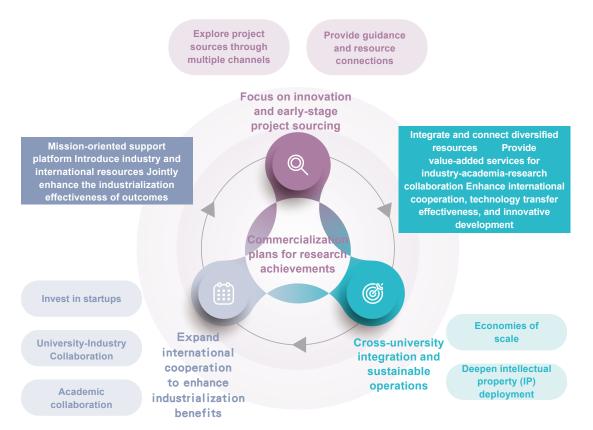


The event "Resilient Spirit: Indonesia's Journey to Freedom" commemorated the stories of revolutionary heroes in Indonesia's independence movement through theatrical performances, while also introducing and promoting Indonesian culture.

#### **International Industry-Academia Collaboration and Exchange**

To enhance academic exchange outcomes and strengthen connections with domestic and international industries, NPUST established the "Research and Industry Commercialization Platform Office." Through cross-institutional and interdisciplinary research collaboration, the University builds industry-academia cooperation platforms and connects with international markets. With a mutually beneficial and sustainable approach, industry resources are introduced into academia, while faculty research and development technologies are transferred to industry. For example, in 2023, NPUST marketed globally via the LinkedIn platform, and in 2024, it collaborated with international patent firms to promote international patent marketing, uncovering potential cooperation opportunities and expanding into global markets.

Vision and Strategies of 1. a Sustainable University



From 2022 to 2024, NPUST carried out industry-academia cooperation projects with countries such as the United States, France, Germany, the Netherlands, and Thailand, with a total project amount of approximately NT\$35.75 million. The University also signed international strategic alliances with eight countries, including the United States, the United Kingdom, Japan, South Korea, Thailand, Vietnam, the Philippines, and Indonesia.

# ◆ Statistics on Faculty International Industry-Academia Cooperation

Year	Country	Amount (NT\$)
2022	United States, Germany, the Netherlands, Austria, Indonesia, Dominican Republic, Hong Kong	16,696,800
2023	United States, Germany, the Netherlands, United Kingdom, France, Belgium, Vietnam, Thailand	11,995,818
2024	United States, the Netherlands, France, Vietnam, Canada, Spain, Japan, Thailand, Singapore, Hong Kong	7,053,337

# ◆ Statistics on International Strategic Alliances Signed with Foreign Institutions

Year	Country	Name of Unit
	International agricultural research organizations jointly established by governments and the Asian Development Bank (ADB) from seven countries, including Taiwan, the United States, Japan, South Korea, Thailand, Vietnam, and the Philippines	World Vegetable Center
2022	Vietnam	Asia Nutrition Technologies (LA) CO., LTD
	Vietnam	Vietnam Academy of Science and Technology – Institute of Genomics
	Indonesia	Taiwan Business Association of Central Java, Indonesia,
	Cayman Islands	Ascendo Biotechnology, Inc. Taiwan Branch (Incorporated in the Cayman Islands)
	Vietnam	Institute of Vietnam Research and Development of Central Vietnam
2023	Indonesia	Bosowa Corporation
	Indonesia	PT. Haloni Jane Tbk
	Philippines	Magnus Corporation
2024	Indonesia	PT. Galung Loanna Indonesia

#### 2024 NPUST Sustainability Report

#### Participation in and Organization of International Academic Activities

NPUST serves as the permanent secretariat of the University Network for Tropical Agriculture (UNTA), assisting member institutions in organizing general assemblies and forums. In particular, the University fosters global partnership exchange in the field of agricultural technology through various forms, including sustainability courses, workshops, forums, and education exhibitions.

#### **Achievements in International Academic Activities**

International Symposium on Sustainable Development and 2024 UNTA Annual Conference

12th Taiwan-Thailand Bilateral Symposium

3rd East Asia Joint Veterinary Academic Symposium



On the occasion of the University's centennial, NPUST hosted the "International Symposium on Sustainable Development and UNTA Annual Conference," bringing together scholars and experts from around the world to discuss USR implementation, Al applications in agriculture, and tropical agricultural innovation, collectively advancing a sustainable future and international cooperation.



Focusing on sustainable agriculture and One Health, the event covered three major fields — agriculture, food science, and veterinary medicine — and included the presentation of 53 academic papers. NPUST deepened cooperation with sister schools such as Kasetsart University in Thailand, promoting international academic exchange and industry-academia collaboration.



Focusing on eight major topics including animal diseases, vaccine development, and zoonoses, the symposium attracted more than 200 experts and scholars from home and abroad, promoting veterinary science exchange among three East Asian countries and advancing the sustainable development of both animal and human health.

2024 Tropical Forestry Symposium

Taiwan-Japan Satoyama Exchange 2023: "Deep Cultivation of Satoyama" Symposium

2024 International Forum on Tourism, Leisure, and Hospitality Industry-Academia Collaboration



Co-organized with the Forestry and Nature Conservation Agency, the "2024 Tropical Forestry Symposium" focused on forest ecological conservation and natural carbon sinks, gathering experts from industry, academia, and research institutions to discuss forest management and climate change response strategies, and to jointly promote the sustainable development of Taiwan's forestry sector.



In cooperation with the Forestry and Nature Conservation Agency, the University invited six experts and scholars from Japan to work together with government, industry, and academia to share practical experiences in the conservation and utilization of Satoyama landscapes in both Taiwan and Japan.



NPUST's Department of Leisure, Recreation and Tourism Management co-hosted the "2024 International Forum on Tourism, Leisure, and Hospitality Industry-Academia Collaboration" with Club Med and signed a memorandum of understanding to link six universities, promote international exchange, and expand students' overseas internship opportunities and global career development potential.

## Social Co-Prosperity - SDGs Highlights

**Cultural Heritage and Sustainable Development** 

**Revitalizing and Enhancing Makatao Healthy Agricultural** Industry

**Science Education and Local Co-Prosperity** 

7th Hirano Science Festival and Kaohsiung National Defense Day

International Cooperation and Sustainable Agriculture

**2023 UNTA Annual General Assembly** 

2.3 4.7 8.9 11.a 12.b

4.3 9.5 11.a











NPUST has long been committed to applying agricultural technology and fulfilling social responsibility. Through the Ministry of Education's USR project "Revitalizing and Enhancing Makatao Healthy Agricultural Industry." the University actively collaborates with local communities to promote eco-friendly agriculture and preserve cultural heritage. The cross-disciplinary team has gradually built a self-sufficient and sustainable model of specialty agricultural economy through agricultural production, food processing, cultural education, and community engagement.

The Smart Mechatronics Program team organized the "Hirano Science Festival," attracting more than 4,000 participants and becoming a major annual science education event in the region. The event brought together 40 universities, high schools, and organizations, featuring 100 interactive booths covering fields such as artificial intelligence, robotics, national defense education, and environmental sustainability. In addition, the event integrated local agricultural characteristics — for example, the "Milkfish Science Classroom" — to promote the integration of science and industry.

The 2023 Annual General Assembly of the University Network for Tropical Agriculture (UNTA) was hosted by Brawijaya University in Indonesia, with NPUST serving as the permanent secretariat to assist with the organization. The conference, themed "Innovating Sustainable Agricultural Production to Ensure Climate-Resilient Digital Agriculture," attracted over 250 scholars and students from nine member universities to jointly explore how agriculture can respond to the challenges posed by climate change. This event deepened international partnerships and provided key strategies and opportunities for the sustainable development of tropical agriculture. Future efforts will continue to promote technological innovation and international collaboration.





# 6-1 Value of the Sustainabilty Report

- 1. Strengthening the University's governance capacity, enhancing information transparency, and improving social reputation.
- Providing a comprehensive assessment of the University's information on governance, environment, social responsibility, and risk management.
- 3. Communicating the University's core values and vision regarding sustainable development and social responsibility.
- 4. Demonstrating the University's commitment to continuous improvement in sustainable development and proposing response strategies to major issues.
- 5. Linking the medium- and long-term goals in the University's development plan with the SDGs and aligning them with GRI standards.
- 6. Showcasing the University's concrete contributions to environmental protection and social responsibility to enhance trust from governments, businesses, and nonprofit organizations.

## 6-2 Achievements in Sustainability Performance

- In 2022, the University and nine other national universities jointly established the "Taiwan University Alliance for Sustainable Governance," assuming responsibility for promoting sustainable development and social responsibility in higher education.
- In 2023, the University established "TSH@NPUST 1.5° C Food and Consumption Transition Hub," Taiwan's seventh TSH hub, focusing on sustainable food production and consumption.
- In 2023, the University and the Pingtung County Government jointly established the "Pingtung County Indigenous Long-Term Care Service Research and Development Center" to plan and promote long-term care services for local communities, achieving the goal of precision long-term care.
- In 2024, the University formed the "Taiwan Ecotourism and Local Revitalization Alliance" in collaboration with ecotourism support teams and tribal communities across Taiwan.
- In 2024, the University conducted its first "Campus Greenhouse Gas Inventory" and completed the external verification report.
- In 2023, the University received the "National Sustainable Development Award Education Category" from the Executive Yuan.
- In 2024, the University received the "Outstanding University for Overseas Student Support" award from the Ministry of Education.
- In 2024, the University was recognized by the Ministry of Education as an "Outstanding Agency for Information Security Auditing for Public Institutions and Designated Non-Public Institutions (2022–2023)."
- In the 2024 National Intercollegiate Athletic Games, the University won 10 gold, 2 silver, and 4 bronze medals, ranking second among universities of science and technology nationwide.
- From 2014 to 2024, the University ranked first nationally for 11 consecutive years in the "UI GreenMetric World University Rankings," placing second in Asia and 23rd in the world in 2024.
- From 2021 to 2024, the University ranked first among universities of science and technology nationwide in the Times Higher Education "Impact Rankings" for four consecutive years. In 2024, the University ranked fifth nationwide, with five indicators among the global top 100.
- In the 2025 Times Higher Education "Interdisciplinary Rankings," the University ranked second among universities of science and technology nationwide and seventh nationwide overall.
- From 2022 to 2024, in the QS World University Rankings, the University achieved a five-star (Excellence) rating in six indicators: teaching, infrastructure, innovation, employability, academic development, and inclusiveness.
- In 2023, the University received the "Gold Award for Sustainability Report University Category" at the 16th TCSA Taiwan Corporate Sustainability Awards.
- In 2023, the University received the "Green Campus Grand Prize" and the "Model Award for Well-being and Coexistence" at the 4th USR University Social Responsibility Awards presented by Global Views Monthly.
- In 2024, the University received the "Model Award for Well-being and Coexistence" at the 5th USR University Social Responsibility Awards presented by Global Views Monthly.
- In 2024, the University was awarded the "University Citizenship Award Public Universities of Science and Technology Category" by CommonWealth Magazine.







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Number of Disclosure	Title of Disclosure	Corresponding Section and Description	Page
	GRI 2: 20	021	
	Organization and its re	porting practices	
2-1	Organizational details	1-1 Sustainability Evolution	15
2-2	Entities included in the organization's sustainability reporting	About the Report	3
2-3	Reporting period, frequency and contact point	About the Report	3
2-4	Restatements of information	4-3 Energy and Resource Management 5-4 International Exchange and Global Partnerships	65 94
2-5	External assurance	Statement of Audit	106
	Activities and	workers	
2-6	Activities, value chain and other business relationships	1-1 Sustainability Evolution	15
2-7	Staff	2-1 Recruitment and Retention of Outstanding Talent	32
2-8	Workers who are not employees	2-1 Recruitment and Retention of Outstanding Talent	32
	Governa	псе	
2-9	Governance structure and composition	1-2 Sustainability Governance Structure	17
2-10	Nomination and selection of the highest governance body	1-2 Sustainability Governance Structure	17
2-11	Chair of the highest governance body	1-2 Sustainability Governance Structure	17
2-12	Role of the highest governance body in overseeing the management of impacts	1-2 Sustainability Governance Structure	17
2-13	Delegation of responsibility for managing impacts	1-2 Sustainability Governance Structure	17
2-14	Role of the highest governance body in sustainability reporting	1-2 Sustainability Governance Structure	18

Number of		Corresponding Section and	
Disclosure	Title of Disclosure	Corresponding Section and Description	Page
2-15	Conflicts of interest	NPUST, as a public institution of science and technology, operates without conflic interest or related concerns.	
2-16	Communication of critical concerns	1-2 Sustainability Governance Structure	18
2-17	Collective knowledge of the highest governance body	1-2 Sustainability Governance Structure	18
2-18	Evaluation of the performance of the highest governance body	1-2 Sustainability Governance     Structure     3-3 Internal Control and Internal Audit	17 59
2-19	Remuneration policies	2-1 Recruitment and Retention of Outstanding Talent	33
2-20	Process to determine remuneration	2-1 Recruitment and Retention of Outstanding Talent	33
2-21	Annual Total Remuneration Ratio	2-1 Recruitment and Retention of Outstanding Talent	33
	Strategy, policies a	and practices	
2-22	Statement on sustainable development strategy	1-3 Vision and Action Strategies for Sustainable Development	20
2-23	Policy commitment	1-4 Identification of Material Topics and Management Policies	25- 27
2-24	Embedding policy commitments	1-4 Identification of Material Topics and Management Policies	25- 27
2-25	Processes to remediate negative impacts	1-4 Identification of Material Topics and Management Policies     1-5 Communication and Engagement with Stakeholders	23 28
2-26	Mechanisms for seeking advice and raising concerns	1-5 Communication and Engagement with Stakeholders	28
2-27	Compliance with laws and regulations	2-6 Administrative Legal System and Compliance	51
2-28	Membership associations	5-3 External Social Inclusion	87
	Stakeholder en	gagement	
2-29	Approach to stakeholder engagement	1-4 Identification of Material Topics and Management Policies	22
2-30	Collective bargaining agreements	Our employees are mostly teachers who not suitable for forming a labor union.	are



	GRI 3: 2021					
Number of Disclosure	Title of Disclosure	Corresponding Section and Description	Page			
3-1	Process to determine material topics	1-4 Identification of Material Topics and Management Policies	22-23			
3-2	List of material topics	1-4 Identification of Material Topics and Management Policies     Description of changes in material issues	22-23 105			
3-3	Management of material topics	1-4 Identification of Material Topics and Management Policies	22-23			

## **Material Topics**

GRI Topic	Number of Disclosure	Title of Disclosure	Corresponding	Page	Corresponding SDG Targets
		E2 Low-Carbon C	ampus		
	305-1	Direct (Scope 1) Greenhouse Gas Emissions			
GRI305 : Emissions 2016	305-2	Energy Indirect (Scope 2) Greenhouse Gas Emissions	4-2 Low-Carbon Campus and Net-Zero Transition	62	9.4 13.3
	305-3	Other Indirect (Scope 3) Greenhouse Gas Emissions			
		E6 Water Managemer	nt and Use		
GRI 303:	303-1	Interactions with water as a shared resource	4-3 Energy and		
Water and Effluents 2018	303-2	Management of water discharge related impacts	Resource Management	67	6.3 6.5
	303-3	Water withdral			
S4 USR and Local Co-Prosperity					
GRI 413: Local Communities 2016	413-2	Operations with significant actual and potential negative impacts on local communities	5-3 External Social Inclusion	87	11.a 12.b 17.17

## **Self-Defined Material Issues**

Material Topics	Number of Disclosure	Title of Disclosure	Corresponding	Page	Corresponding SDG Targets
		G4 Univers	sity Reputation		
G101 Reputation management	3-3	Management of material topics	2-7 Sustainability Governance Awards	53	4.3 16.6
		G5 Teachin	g Environment		
G102 Campus Development	3-3	Management of material topics	2-2 Campus Environment and Infrastructure	36	4.7 9.1
		G6 Teaching Qua	lity and Performance		
G103 Faculty Quality	3-3	Management of material topics	2-3 Teaching Quality Assurance and Student Support	39-40	4.3 4.7
G7 Student Internships and Employment					
G104 Career Counseling	3-3	Management of material topics	2-4 Student Internships, Employment, and Career Guidance	45	4.4 8.5
		S1 Campus Env	ironment and Safety		
S101 Campus Safety	3-3	Management of material topics	5-2 Internal Social Inclusion	75	3.4 3.6 11.2 11.7
		S4 Industry-Aca	demia Collaboration		
S102 Industry- Academia Exchange	3-3	Management of material topics	2-5 Academic Research and Industry-Academia Collaboration	49	8.2 9.5
		S7 Sustaina	bility Education		
S103 Sustainability talents	3-3	Management of material topics	5-2 Internal Social Inclusion	80	4.7 12.8

# **General Topics**

GRI Topics	Number of Disclosure	Title of Disclosure	Corresponding Section and Description	Page
		GRI 200: Economic		
GRI 201: Economic Performance 2016	201-4	Financial assistance received from government	3-1 Financial Overview and Sustainable Investments	56
GRI 203: Indirect Economic Impacts 2016	203-1	Infrastructure investments and services supported	5-3 External Social Inclusion	87
		GRI 400: Social		
	401-1	New employee hires and employee turnover	2-1 Recruitment and Retention of Outstanding Talent	32
GRI 401 : Employment 2016	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	2-1 Recruitment and Retention of Outstanding Talent	35
	401-3	Parental leave	2-1 Recruitment and Retention of Outstanding Talent	35
	403-2	Hazard identification, risk assessment, and incident investigation	5-2 Internal Social Inclusion (occupational safety and health)	78
	403-3	Occupational health services	5-2 Internal Social Inclusion (occupational safety and health)	78
GRI 403 : Occupational Health and Safety 2018	403-4	Worker participation, consultation, and communication on occupational health and safety	5-2 Internal Social Inclusion (occupational safety and health)	78
	403-5	Worker training on occupational health and safety	5-2 Internal Social Inclusion (occupational safety and health)	78
	403-6	Promotion of worker health	5-2 Internal Social Inclusion (occupational safety and health)	78
GRI 403:	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	5-2 Internal Social Inclusion (occupational safety and health)	78
Occupational Health and Safety 2018	403-8	Workers covered by an occupational health and safety management system	5-2 Internal Social Inclusion (occupational safety and health)	78
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	2-1 Recruitment and Retention of Outstanding Talent	34
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	2-1 Recruitment and Retention of Outstanding Talent	32

# **Appendix 2 SASB-Education Content Index**

Topic	Number of Disclosure	Metric	Description/Corresponding Sections	Page
		Table 1. Sustainability Disclosure Topics & Accounting Metrics		
	SV-ED-230a.1	Description of approach to identifying and addressing data security risks	5-2 Internal Social Inclusion (Information Security)	79
Data Security	SV-ED-230a.2	Description of policies and practices relating to collection, usage, and retention of student information	5-2 Internal Social Inclusion (Information Security)	79
	SV-ED-230a.3	<ul><li>(1) Number of data breaches</li><li>(2) percentage involving personally identifiable information (PII)</li><li>(3) number of students affected</li></ul>	5-2 Internal Social Inclusion (Information Security)	79
	SV-ED-260a.1	Graduation rate	2-4 Student Internships, Employment, and Career Guidance	48
Quality ofEducation & Gainful Employment	SV-ED-260a.2	On-time completion rate	2-4 Student Internships, Employment, and Career Guidance	48
	SV-ED-260a.3	Job placement rate	2-4 Student Internships, Employment, and Career Guidance	48
Marketing &Recruiting Practices	SV-ED-270a.3	(1) Instruction and student services expenses and (2) marketing and recruiting expenses	3-1 Financial Overview and Sustainable Investments	56
		Table 2. Activity Metrics		
	SV-ED-000.A	Number of students enrolled	1-1 Sustainability Evolution	15
	SV-ED-000.D	Number of: (1) teaching staff and (2) all other staff	2-1 Recruitment and Retention of Outstanding Talent	32

#### 7. Appendix

## **Description of changes in material issues**

Based on the previous (2022) report, 31 potential topics of concern were identified under the three major dimensions of sustainability. For this edition (2024), the working group conducted a renewed review of all topics and compiled those of greater concern to stakeholders. A total of 32 topics are listed in this report, from which 10 material topics were selected. The adjustments are as follows:

	2022 Sustainability Report	
Sustainability Governance (G)	Environmental Sustainability (E)	Social Co-Prosperity (S)
G01 Stakeholder Inclusiveness	E01 Climate Change Governance and Action	S01 Sharing of Education Resources
G02 Financial Management	E02 Energy Conservation Management	S02 Alumni Contacts and Activities
G03 Compliance with Laws and Regulations	E03 Renewables	S03 Social Linkage
G04 Academic Integrity	E04 Waste Recycling and Reuse	S04 USR and Local Co- Prosperity
G05 Gender Equality and Well- Being	E05 Green Building	S05 Global Partnership
G06 Infrastructure and Hardware/Software Facilities	E06 Water Management and Use	S06 On-Campus and Off- Campus Traffic
G07 Teaching Quality	E07 Protection and Restoration of Biodiversity	S07 Campus Environment and Safety
G08 Career Development and University-Industry Collaboration	E08 Green Procurement and Selection of Local Products	S08 Information Security
G09 Study Assistance Measures	E09 Soil Conservation and Disaster Prevention	S09 Occupational Safety and Health
G10 Student Physical and Mental Health		
G11 Sustainability Education		
G12 Academic Performance		
G13 COVID-19 Countermeasures		

Being	E05 Green Building	S05 Global Partnership
G06 Infrastructure and Hardware/Software Facilities	E06 Water Management and Use	S06 On-Campus and Off- Campus Traffic
G07 Teaching Quality	E07 Protection and Restoration of Biodiversity	S07 Campus Environment and Safety
G08 Career Development and University-Industry Collaboration	E08 Green Procurement and Selection of Local Products	S08 Information Security
G09 Study Assistance Measures	E09 Soil Conservation and Disaster Prevention	S09 Occupational Safety and Health
G10 Student Physical and Mental Health		
G11 Sustainability Education		
G12 Academic Performance		
G13 COVID-19 Countermeasures		
*Items in bold face are material issues		

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items	111	DOIG	race	are	materia	issues.

	2024 Sustainability Report		
Sustainability Governance (G)	Environmental Sustainability (E)	Social Co-Prosperity (S)	
G1 Stakeholder Engagement	E1 Climate Change Response Actions	S1 Campus Environment and Safety	
G2 Institutional Governance	E2 Low-Carbon Campus	S2 Study Assistance Measures	
G3 Financial Governance	E3 Water Management and Use	S3 Attracting High-Quality Talent	
G4 University Reputation	E4 Energy and Resource Management	S4 Industry-Academia Collaboration	
G5 Teaching Environment	E5 Waste Management	S5 Occupational Safety and Health	
G6 Teaching Quality and Performance	E6 Sustainable Supply Chain	S6 Information Security	
G7 Student Internships and Employment	E7 Soil Conservation and Disaster Prevention	S7 Sustainability Education	
G8 Academic and Integrity Ethics	E8 Biodiversity Conservation and Restoration	S8 Human Rights Protection	
G9 Faculty and Staff Professional Development		S9 Alumni Relations and Social Impact	
G10 Academic Performance		S10 Social Impact and Partnership Alliances	
		S11 Sharing of Education Resources	
		S12 University Social Responsibility Practice	
		S13 Disease Risk Response	
		S14 Multicultural Exchange and Global Partnerships	

<sup>\*</sup>Items in bold face are material issues.

Vision and Strategies of

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#### 2024 NPUST Sustainability Report

# **Appendix 3 Statement of Audit Opinion**



Certification by



#### 互瑞仕國際驗證股份有限公司

#### ARES INTERNATIONAL'S Opinion

We summarize the contents of National Pingtung University of Science and Technology's Sustainability Report and provide a fair opinion of National Pingtung University of Science and Technology's relevant operations and performance. We believe that the indices such as economic, social and environmental performance are presented correctly. The performance indices disclosed in the report demonstrate National Pingtung University of Science and Technology's efforts to identify and meet stakeholder

AA1000 Assurance Standard (v3), as well as planning and implemented this part of the activities to obtain the necessary information and data. We believe there are sufficient evidences provided by National Pingtung University of Science and Technology to show that its reporting method according to the AA1000

- In order to collect evidences related to conclusions, we implemented the following tasks Implement the high-level management review for topics from external groups related to ESG Sustainability policy to confirm the appropriateness of the report in this statement.
- Discussions about stakeholder's engagement with the managers of National Pingtung University of Interviews with employees related to ESG Sustainability management, report preparation and
- Review the critical developments related to organizations.
- Review the scope and maturity of systems related to financial and non-financial reports. Review the supporting evidences declared in the report, and the process management described in the report and its associated AA1000 Accountability Principles (2018) on the principles of inclusivity, materiality responsiveness and impact

The detailed review results of the AA1000 Accountability Principles and the core disclosures of the Global Reporting Initiative (GRI) Standards, Sustainability Accounting Standards Board (SASB) Standards for inclusivity, materiality, responsiveness and impact are as follows:

#### 亞瑞什國際賠缴股份有限公司

#### Independent Assurance Statement

Statement No. 000-697/V3-7QYJG

#### independent Assurance Statement by ARES Certification Co., Ltd. on National Pingtung University of Science and Technology Sustainability Report of 2023 2024

ARES International Certification Co., Ltd. and National Pingtung University of Science and Technology are ARES International has no financial relationship with National Pingtung University of Science and

The purpose of this Independence Assurance Statement (hereinafter referred to as Statement) is only to sclude that the relevant issues within the scope of the National Pingtung University of Science and Technology 's Sustainability Report are guaranteed, but not for other purposes. Except for this Statement on the verified facts, for any use of other purposes, or any person who read this Statement, ARES International is not responsible or liable for any legal or other responsibility.

ARES International by National Pingtung University of Science and Technology, Therefore, the scope of the verification is based on and confined to the content of these provided information, and ARES International shall consider that the contents of the information are complete and accurate

answered by the National Pingtung University of Science and Technology.

The agreed scope of assurance by National Pingtung University of Science and Technology and ARES International includes the following:

The contents of the entire ESG Sustainability Report and all operating performance of Nationa Pingtung University of Science and Technology from January 1st, 2023 to December 31st, 2024. According to the type 1 of application of the AA1000 Assurance Standard (v3), the assessed nature and degree of the National Pingtung University of Science and Technology's compliance with the AA1000 Accountability Principles (2018) but excluding the verification of the reliability of the information or data disclosed in the Sustainability Report.

This statement is prepared in Chinese and has an English version for reference. In the event of any discrepancy between the Chinese and English versions, the Chinese version shall prevail

#### 亞瑞什爾際賠總股份有限公司

This report reflects that National Pingtung University of Science and Technology engages with its stakeholder through a variety of channels, such as internal and external co and the activities of stakeholders. This report covers topics of concern in stakeholders associated with ional Pingtung University of Science and Technology, fairly reports, and discloses eco and environmental information. In our professional opinions, this report covers National Pingtung University of Science and Technology's inclusivity issues.

National Pingtung University of Science and Technology publishes the information related to ESG Sustainability to enable stakeholders to judge the National Pingtung University of Science and Technology's management and performance. In our professional opinions, this report appropriately covers the material issues of National Pingtung University of Science and Technology.

National Pingtung University of Science and Technology responds to requests and opinions from communication mechanisms for numerous internal and external stakeholders. In our professiona opinions, this report covers National Pingtung University of Science and Technology's resp

National Pingtung University of Science and Technology developed and implem monitor, measure and account for how their actions affect the wider ecosystem, echoing all the aspects of this report demonstrated by their own management systems and capabilities issue content and provide the comprehensive and balanced disclosure, such as the declaration of energy projects and carbon footprint verification. In our professional opinions, this report covers National Pingtung University of Science and Technology's impact topic.

National Pingtung University of Science and Technology provides declaration of compliance with the GRI Standards. Based on the results of the review, we confirmed that the relevant ESG Sustainability indicators referred to GRI Standards in the report have been completely disclosed, partially disclosed or omitted. In our professional opinions, this declaration covers the Sustainability topics of National Pingtung University

#### 亞瑞仕國際聽續股份有限公司

Standards. Based on the results of the review, we confirmed that the relevant ESG Sustainability indicators referred to SASB Standards in the report have been completely disclosed, partially disclosed or omitted. In our professional opinions, this declaration covers the Sustainability topics of National Pingtung University

ording to the AA1000 Assurance Standard (v3), we verify this statement as a medium level of assurance as in the scope and method described in this statement

#### Responsibility

The responsibility of this Sustainability report, as stated in this statement, is owned by the person in charge of National Pingtung University of Science and Technology. The responsibility of ARES International is to provide professional opinions based on the described scope and method, and to provide an independent

ARES International is composed of experts in a various field of management systems. The verification team is composed of members in the professional backgrounds with the qualifications of lead auditor trained in sustainable development, environmental and social management standards such as AA1000AS, AA1000AP, ISO 14001, ISO 14064-1, ISO 14067, ISO 45001 and ISO 9001. This independent assurance statement is onal's fair trading guidelines.

#### On behalf of the assurance team May 22, 2025

ARES International Certification Co., Ltd. (ARES Certification Group) Taiwan, Republic of China

Calin Chen

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