

# 02 University governance



## Major subjects of this chapter

GRI 201: Economic performance/learning effectiveness

NCNU-03: Learning effectiveness

NCNU-04: Teaching quality

NCNU-05: Research achievement and patent



## Priority readers

- ☒ Entrepreneurs
- ☒ Faculty, staff, and students
- ☒ Parents
- ☒ Government agencies
- ☒ Alumni
- ☐ Community people/NGO
- ☐ Suppliers

## 2.1 Performance of education

### 2.2 Teaching quality

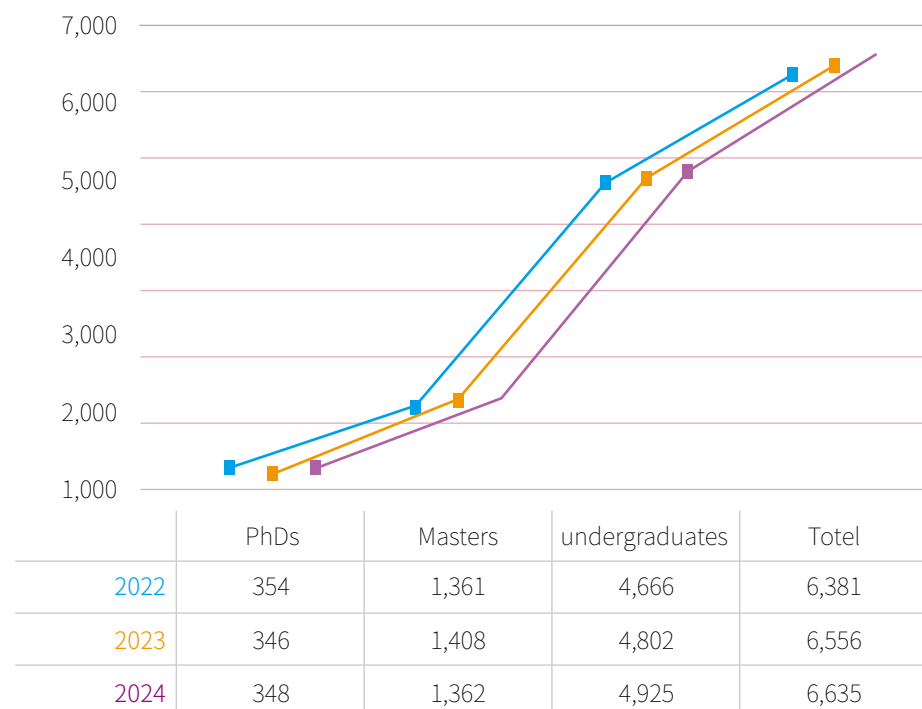
### 2.3 Internationalization

### 2.4 Participation of external organization

## 2.1 Performance of education

### 1.Student numbers grew steady.

Trend of student numbers by programs from 2022 to 2024



Total student numbers reached 6,381, 6,556, and 6,635 respectively, resulting annual growth rate of 2.74% and 1.21% from 2022 to 2024. PhD programs maintained between 345 and 355 students, while Master's programs ranged approximately from 1,360 to 1,410 students. Undergraduates increased steadily from 4,666 (2022) to 4,925 (2024) students with a growth rate of 5.55%.

Established Department of Nursing strategically, in-service program in Nursing, and in-service program in long-term care for the elderly. Actively developed diversified recruitment to effectively maintain enrollment base. Student numbers kept stable growth from 2025 to 2028 based on current development trends.

### 2.Effectiveness-implementation of Higher Education Sprout Project

Actively promoted Higher Education Sprout Project to achieve the goal of net zero emissions in 2050. Made significant effectiveness, including innovative teaching, social responsibility, and industry-academia cooperation:

#### Aspect of teaching innovation

- Offered AI literacy-oriented courses and developed AI-powered learning assistant system to strengthen students' interdisciplinary and self-directed learning capabilities.
- Actively developed joint dual-degree programs. Provided students with diverse overseas internship and exchange opportunities to promote their international mobility.

#### Aspect of social responsibility

- Promoted sustainable campus development and eco-friendly measures to implement the philosophy of environmental education.
- Encouraged faculty and students to participate in local mutual learning and care for rural education, and collaborated with local social groups to promote the resilience of disaster prevention on campus and in community.

#### Aspect of industry-academia cooperation

- Offered education industry-school co-construction programs in partnership with industry experts to strengthen students' practical skills.
- Built an innovation and entrepreneurial ecosystem to cultivate students' abilities and promote their employment competitiveness.

Subsidy of Higher Education Sprout Project increased year by year from NT\$7,859,037 (2021) to NT\$89,788,348 (2024) with a growth rate of 10 times over, Ministry of Education highly commended about it.





### 3. Innovative inter-university collaboration model

NCNU partnered with National Ilan University, University of Taipei, and Taipei National University of the Arts to form the SCoT Four-University Alliance to build a role model of innovative inter-university collaboration. Pioneered the micro-credit course of “Sustainable Study Tour: Campus Sharing and Interdisciplinary Practice.” Broke through traditional university boundaries. Students could, therefore, explore different universities features.

The course guided students in understanding four universities’ experiences and practices of sustainable development via intensive study tour format based on United Nations Sustainable Development Goals (SDGs).

This not only enriched students’ learning but also strengthened their professional competences in the field of sustainable development. Also, this demonstrated the commitment to educational innovation, cross universities cooperation, and practice of the philosophy of sustainable development.



▲ Sustainable study tour: group photo from the closing ceremony for campus sharing and interdisciplinary practice

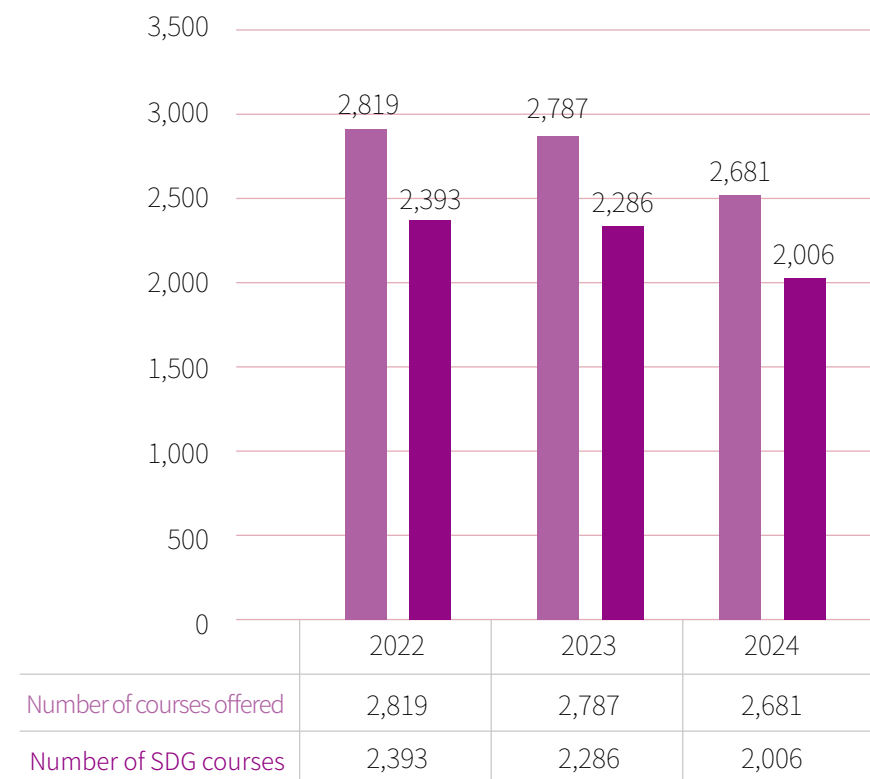
### 4. Incorporating sustainable development into Education

Incorporated sustainable development into curriculum plan. Offered 2,393, 2,286, and 2,006 related courses with United Nations Sustainable Development Goals (SDGs) respectively. The percentage of courses offered on campus that accounted for 85%, 82%, and 74.82% from 2022 to 2024.

#### Diversified development of sustainable curriculum

Emphasized diversity, interdisciplinary, and social participation for curriculum design in recent years. Incorporated elements of eco-conservation, renewable energy, green economy, social caring, justice and fairness, diverse culture, gender equity, and sustainable rural-urban into contents of curriculum.

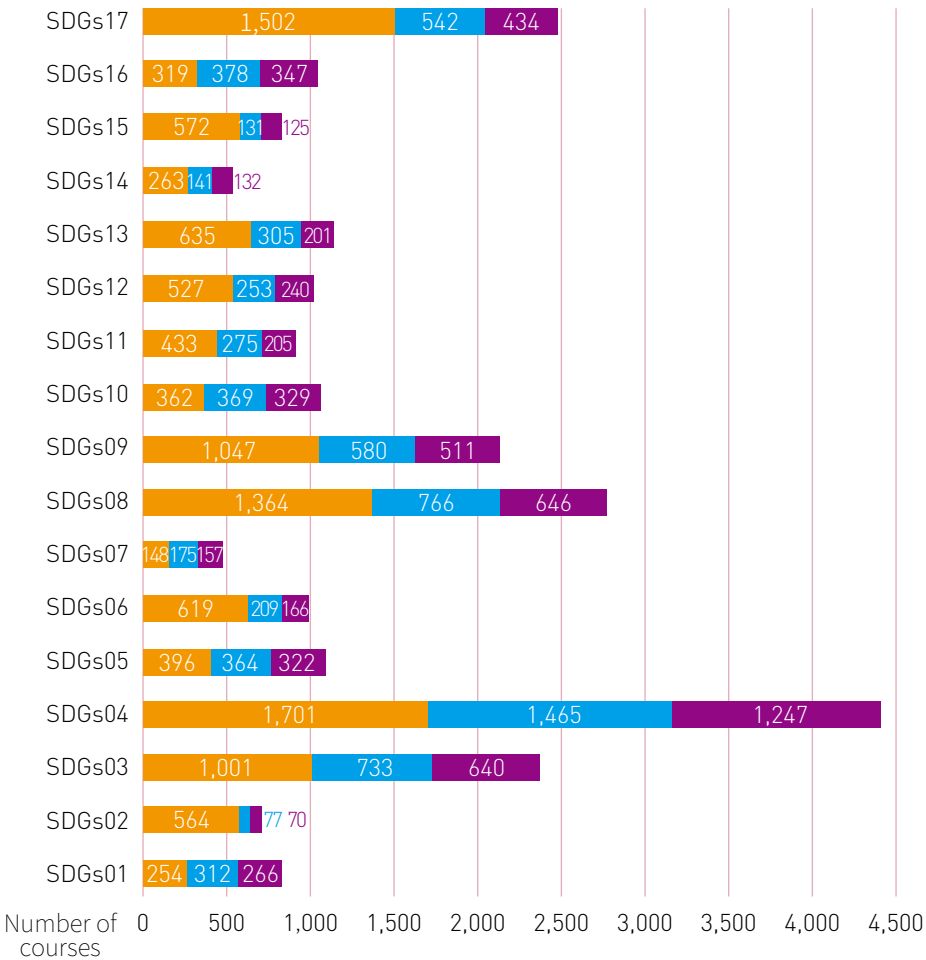
Number of courses and courses with SDGs from 2022 to 2024



Focus areas of SDG courses

SDG courses were mainly focused on:  
SDG 4 “quality education” (offered a total of 4,413 courses from 2022 to 2024)  
SDG 3 “health and well-being” (offered a total of 2,374 courses from 2022 to 2024)  
SDG 8 “employment and economic growth” (offered a total of 2,776 courses from 2022 to 2024)  
SDG 17 “global partnership” (offered a total of 2,478 courses from 2022 to 2024)

Corresponding courses with SDGs 17 items from 2022 to 2024



Distinctive courses of climate action and net zero emissions

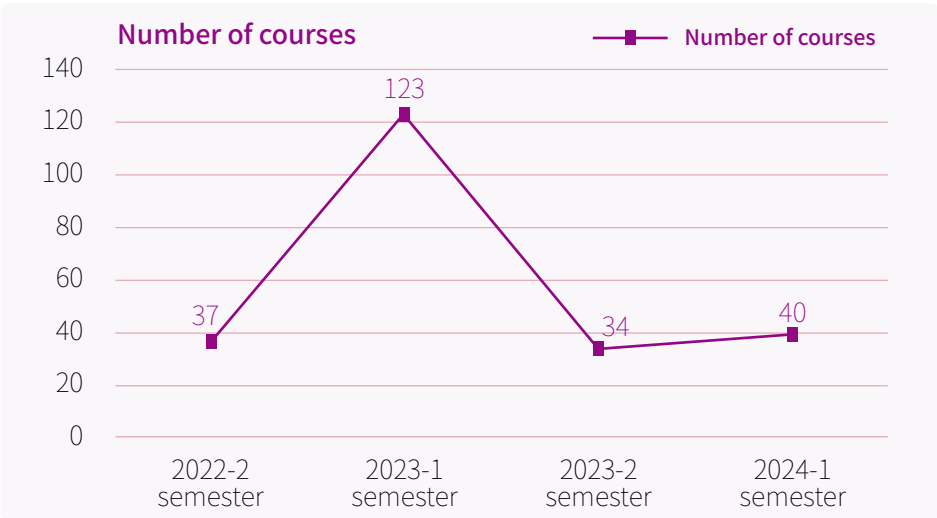
Encouraged departments to respond global issues of “climate change” and “net zero emissions” for their curriculum design. Course content delved into the profound influence of ecosystem, society, economy, and global policy. Offered a total of 234 related courses from 111-2 semester to 113-1 semester. Faculty and students were also encouraged to participate in field-based research.

College of Science and Technology and General Education Center’s courses emphasized strategies and technologies for net zero emissions. This helped students to practice carbon reduction and energy transition across various industries and fields.

Main courses included:

- Eco-conservation and green mapping
- Education practice of community environment
- Sustainable energy resources and carbon management
- Wetland eco-conservation
- Sustainable agriculture
- Environmental laws and regulations

Students could, therefore, fully understand needed diverse measures for achieving the goal of net zero emissions.



Students collaborated with industry experts and scholars for climate change program via participation in professional seminars and internships. These courses and activities cultivated students’ abilities to tackle complex environmental issues of global climate challenges.



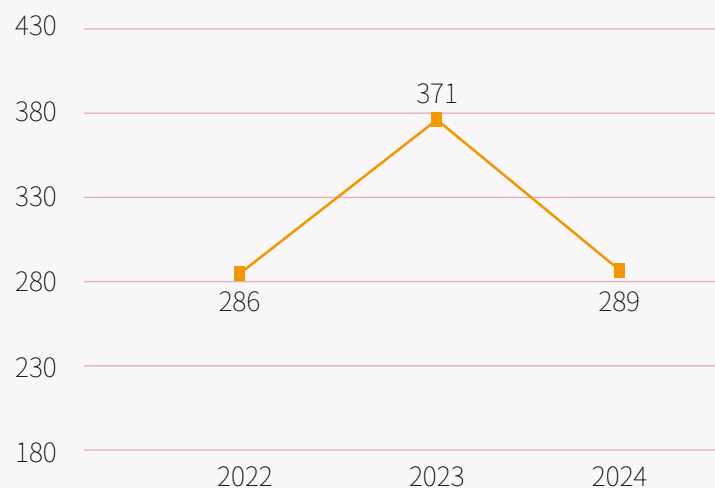
## 5. Achievements of professional certification and civil service examination

A total of **946** persons/time obtained certifications and licenses via civil service examination from 2022 to 2024.

Civil service examinations included senior/junior examination, special examination, special examination for public social workers, professional and technical social workers, special civil service examination for indigenous peoples, Junior Professional and Technical Examinations, and obtained lecturer's certificate.

Obtained certifications and licenses included Ministry of Education's Certificate of Proficiency for Teaching Chinese as a Second/Foreign Language, Level C Sports Coach Certificate, Level C Sports Referee Certificate, Life Insurance, Property Insurance, Foreign Currency, Investment-Type Insurance Certificate, Financial Securities related certificates, Foreign-language tour guide, Foreign-language tour manager, Technician Certificate, Republic of China, AUTOCAD Certificate, Digital Electronics Certificate, Hardware Installation Certificate, Organic, Specialized and Emergency Personnel Certificates, Environmental Safety and Health Related Certificates, Counseling psychologist, Adobe ACP, and Techiciency Quotient Certification...etc.

NCNU person/times growth chart of obtaining certifications and licenses via civil service examination from 2022 to 2024



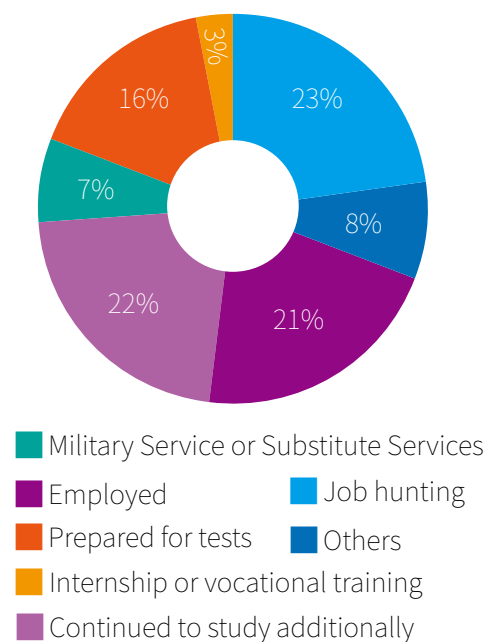
## 6. Graduates employment outcomes and career development

- Concerned graduates' employment competitiveness and career development. Assisted students in transitioning to the workforce thru curriculum plan, industry-academia cooperation, and career counseling mechanism. Outstanding performance in professional certification and civil service examination further strengthened graduates' competitive edge. Employment rate and salary levels grew steady.
- Held a recruitment expo on campus, 35 companies offered 835 job openings then matched 365 people out of 637 participants in 2023.

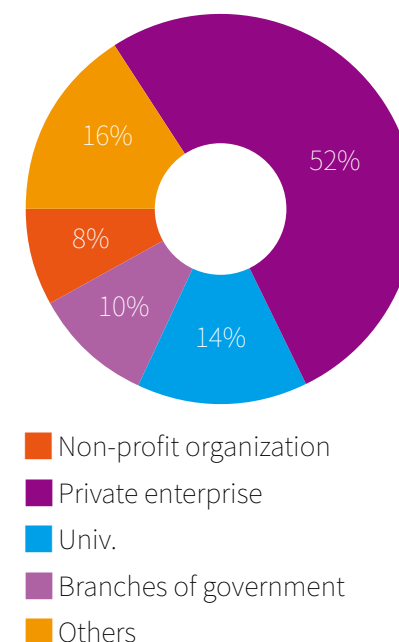
Presented in the chart on the left for the career trajectories of the graduates (graduates of 1<sup>st</sup> year) in 2023. See below for employment status.

Continued to conduct the graduates survey-graduates of 1<sup>st</sup> year, 3<sup>rd</sup> year, and 5<sup>th</sup> year as a reference for career counseling in future.

New graduates survey in 2023



Graduates employment in 2023



• (Source: this was online real-name questionnaires with a total of 1,420 valid samples and the total number of 1,425 students should be tracked in 2024. The effective recovery rate was 99.64%)

## 7. Research capacity and industry-academia innovation

### Academic research performance: promoting international competitiveness

Actively encouraged faculty to involve in academic research, with a goal on publishing high-ranking and highly cited journal articles. Built a sustainable research environment. Strove for research projects from NTSC and Ministry of Education. Also, undertook actively government-commissioned projects and industry-academia cooperation from private enterprises to strengthen research capacity. This enhanced the connection between academic research and industrial technologies to create R&D effectiveness.

- Times Higher Education (THE) announced World University Rankings, NCNU ranked 698th globally from entering the top 1,000 worldwide based on the performance in industry-academia cooperation. Ranked 27th among universities in Taiwan in this category.
- Announcement of a number of seven professors had been nominated World's Top 2 % Scientists in 2024. A total of nine professors were listed in both the "Lifetime Scientific Impact Rankings" and "2023 Annual Scientific Impact Rankings" representing 3% of NCNU's faculty. They came from College of Science and Technology and College of Management. Their studies included semiconductor materials and devices parts, transportation systems, disaster management, artificial intelligence and IoT, and LED technologies.
- Formulated "Rewards of academic research measures" Rewarded full-time instructors for publishing scholarly outputs. The number of journal articles indexed in WOS (SCI and SSCI). This showed consistent growth, particularly those for which instructors served as first authors or corresponding authors.

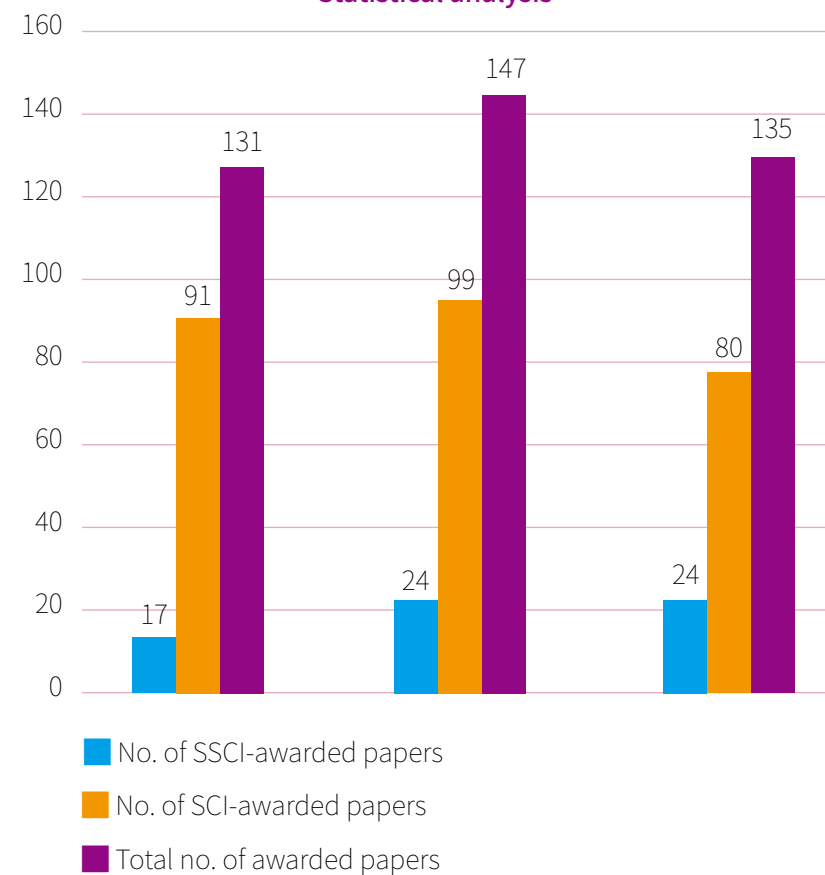
#### Statistical analysis of WOS (SCI, SSCI) journal articles from 2022 to 2024



Source: WOS database retrieval (May 22, 25)



#### No. of awards of published journal articles from 2022 to 2024 Statistical analysis



## R&D capacity: accomplishments of science and technology research project



- **NSTC subsidized a total of NT\$90,055,000 for “Humanity Innovation and Social Practice Coordination Project” from 2013 to 2024.** The project was based on outlook and method of social innovation to promote local revitalization and achieve university social responsibility in Greater Puli Area.
- **NSTC subsidized a total of NT\$39,995,000 for “University–Local Government Partnership for Local Humanities Development and Cross-Sector Governance” project from 2016 to 2024.** This delivered specific designs, networks, and policy recommendations in Nantou County. Mainly focused on topics, such as open government, smart customer service, tourism logistics, Southeast Asian tour guide training, villages touring, food banks, long-term care, Indigenous care, senior education, coding education, and Indigenous museums. This, further, extended collaboration to other counties in Central area.
- **NSTC subsidized NT\$117,281,944 for 96 special research topic projects (passing rate 60.2%) in 2024.** Approved projects/ amount increased gradually every year from 2022 to 2024 as shown in the right figure. This indicated strong performance in academic research and professional performance.
- NSTC subsidized **NT\$2,704,584 for 51 out of 89** projects (pass rate **57.3%**) for “College Student Research Projects” in 2024. Number of applications increased significantly. This cultivated future technology research talents. Five students received the NSTC’s highest honor for undergraduate research—the “Creative Award.”
- Assisted faculty to manage their research achievements thru patent applications, technology transfers, and intellectual property (IP) protections and utilizations. Committed to commercialize research achievements to generate business opportunities and interests in future. Currently, a total of 247 invention patents had been granted with three of them successful technology transfers.

Numbers and amounts NSTC project





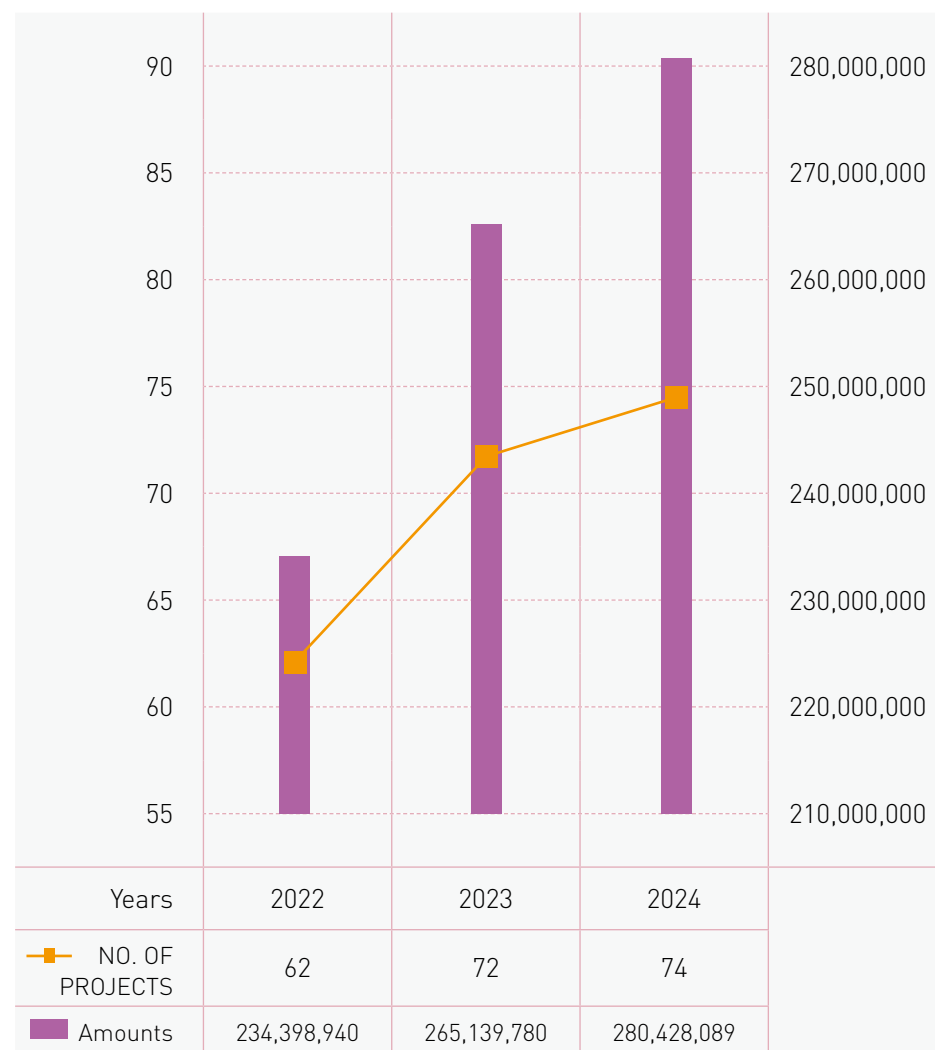
## Industry-academia cooperation: interdisciplinary innovation and resource integration

- Promoted interdisciplinary innovation of humanities in technology for years. Transformed academic R&D capacity into productivity and economic activity thru joint efforts across colleges, departments, and centers. Collaborated with distinctive industries in Central area by government programs and subsidies to develop industry-academia networks. This had come across tourism, healthcare, social work, energy, ICT, education services, disaster prevention and protection, smart agriculture, artificial intelligence, space science, and enterprise management. This demonstrated diverse top quality achievements of industry-academia cooperation.
- Cultivated big data technologies and committed to practical application in educational administration. Assisted K12 Education Administration, Dept. of Higher Education, Dept. of Technological and Vocational Education, Dept. of Student Affairs and Special Education, Dept. of International and Cross-strait Education, Dept. of Information and Technology Education, Ministry of Education to establish more than 20 large-scale systems, such as platforms for high school enrollment management and financial aid application. Moreover, nationwide high school student learning portfolio data were crucial to 12-Year Basic Education policy and the next-generation university admissions reform. Related commissioned projects have reached NT\$380,000,000 from 2022 to 2024. This laid a solid foundation for the development of a national educational big data infrastructure.
- Signed the agreements of “Health and Long-Term Care Talent Development Program for Rural Areas” and “Indigenous Elderly Health and Long-Term Care Talent Cultivation Program” with Puli Christian Hospital that provided funds. Established College of Nursing and Health Welfare via industry-academia cooperation. Promoted performance of education and talents cultivation. Accumulated funding had reached NT\$30,000,000 from 2022 to 2024.

Years	2022	2023	2024	Total
Funding	8,800,000	11,200,000	10,800,000	<b>30,800,000</b>

A total of 74 industry-academia cooperation projects with a total funding of NT\$280,000,000 in 2024, this grew 6% more in 2023 and 20 % more in 2022. Demonstrated fine performance of industry-academia cooperation.

Statistics of government-commissioned and industry-academia cooperation projects from 2022 to 2024





## 8. Intensification of social participation: incorporating expertise into local practice

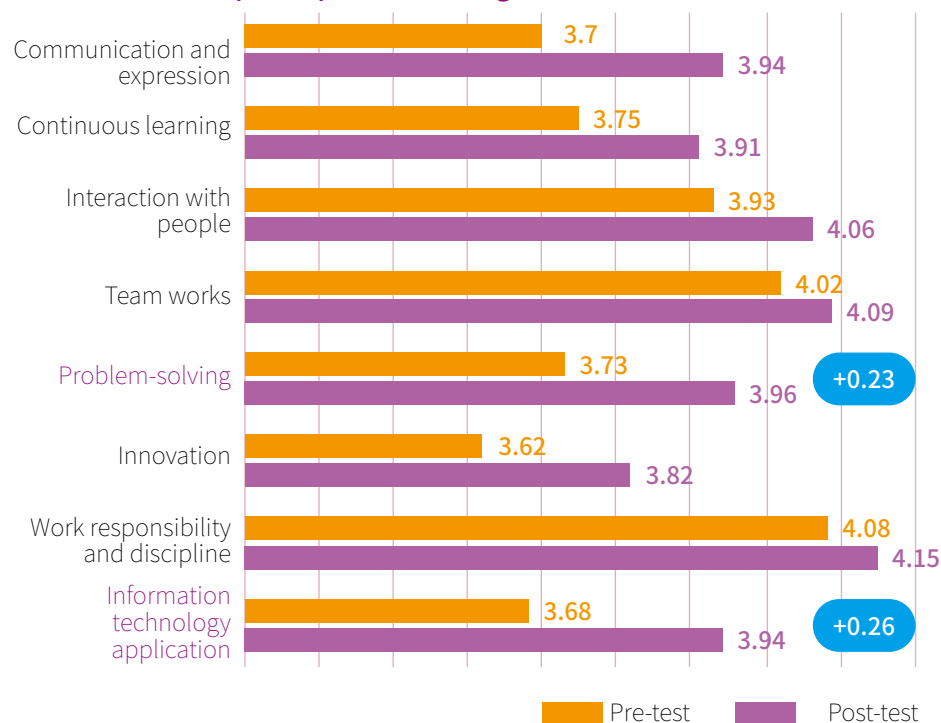
With the support of “University Learning Ecosystem Innovation Program” and “Higher Education Sprout Project” from Ministry of Education since 911 Earthquake, progressively developed social participation courses. These courses fused expertise and local social topics. Deepened students' interdisciplinary understanding and critical thinking. Integrated service learning and social participation courses into general education requirements by 2023. Each department actively promoted the social participation and the philosophy of learning.

### Effectiveness of social participation courses

Offered a total of 22 social participation courses with 810 participants in 2023. Further expanded to 56 courses with 2,455 participants in 2024. In addition, we cooperated with 30 communities.

### Performance of promoting students' common competencies

#### Testing results of common competencies for students in socially participation learning courses in 2023



### Core effectiveness of courses

- “Work responsibility and discipline” abilities, highest performance, with a score of 4.15 points
- “Information technology application” ability, greatest improvement, with an increase of 0.26 points
- Offered “information technology” as required course to emphasize AI applications and interdisciplinary integrations in 2024.
- Reduced study and application gap of expertise learning in future thru course practice.



Designing lesson plans for senior citizens, this fostered students to concern social topics then promoted their senses of social responsibilities.  
Course: social service learning-Dept. of Counseling Psychology and Human Resource Development.

## Sustainable development group

A total of 23 student organizations related to the Sustainable Development Goals (SDGs), covering nine SDG fields to cultivate students' sustainable literacies and practical abilities.

### Environment and Sustainability Category (three organizations)

Mountaineering Club, Animal Protection Club, and Great Compassion Dharma Treasury Buddhist Society



### Education and Culture Category (eight organizations)

Mountain Institute Education Group, Wind Ensemble Club, String Ensemble Club, Drama Club, Info-Maker Club, Astronomy Club...etc.



### Social Service Category (five organizations)

Social Service Group, Chong-De Youth Volunteer Club, Tzu Ching Club, Vitality Yoga Club...etc.



### International Exchange Category (seven organizations)

Overseas Chinese Students Sorority, Malaysia Student Association, Indonesian Student Association, Hong Kong and Macau Student Association...etc.



## Student volunteers community services

### 1. Social Service Group:

adopted innovative learning methods, lively and interesting activities to understand deeply the importance of environmental conservation among elementary school students (Grades 3–6). Early environmental education was essential in response to global challenges, such as climate change, biodiversity loss, and pollution. This hoped children to understand natural ecosystem then learned to respect and cherish the Earth's resources thru handmade, outdoor exploration, and team-based challenges.

### 2. Great Compassion Dharma Treasury Buddhist Society:

held vegetarian promotional activities every Tuesday and Thursday on a regular basis. Advocated the benefits of plant-based diet. This not only improved carbon reduction but also addressed food inequity problem. Furthermore, provided community with senior care services during their free time.

### 3. Mountain Institute Education Group:

students designed their own projects thru a scratch graphical programming platform, in order to have a good education and equal development opportunity.

### 4. Malaysia Student Association:

overseas Chinese students were one of NCNU distinctive features. Assisted elementary school to beautify the environment, including painting the walls in township every year. This created fine memories when studied in Taiwan.



Community service team- Ready Go! Earth Call (Social Service Group)



Great Compassion Dharma Treasury Buddhist Society

## 2.2 Teaching quality

### Faculty teaching supporting system

Dedicated to build a comprehensive faculty teaching supporting system to promote students' learning effectiveness. Held orientation program for new faculty and activity of faculty teaching knowledge, ability to adopt continuously changing for teaching environment. Actively encouraged faculty to establish faculty social groups and develop digital courses. Provided Teaching Assistant (TA) and tutoring system. In addition, held the Teaching Awards selection to promote teaching quality.



#### 1. Training system for new faculty

Formulated the “Guidelines for the Implementation of the Faculty Training System” and provided channels for professional development to new faculty to adapt teaching environment. New faculty met twice per semester with mentor over a two-year period. Documented each meeting. New faculty could develop teaching strategies in collaboration with mentor on a regular basis.

#### 2. Activity of faculty teaching knowledge, ability

Full-time or project instructors should attend the activity at least four hours every academic year in accordance with the “Directions for Promoting Faculty Teaching Knowledge, Ability” Held relevant activities on a regular basis to strengthen teaching expertise growth. Also, encouraged collaboration among units to hold relevant activities. Provided certification for teaching hours earned through external programs. Fostered peer exchange and the development of innovative teaching methods thru diverse activities.

#### 3. Interdisciplinary faculty social groups

Encouraged faculty to assemble social groups to promote interdisciplinary teaching exchange. Established “Guidelines for Subsidizing the Establishment of Faculty Social Groups” that provided funding for research activities and social group subjects. Encouraged teaching innovations across departments. Shared teaching experiences thru meetings among faculty members on a regular basis, offered suggestions for courses integration and developed distinctive interdisciplinary teaching.

#### 4. Promotion of digital materials and courses

Formulated “Subsidy Guidelines for the Development of Instructional Learning Materials” to encourage faculty to integrate instructional learning and course materials since 2011. Promoted producing course materials and digital learning courses. Subsidized a total of six projects in 2024. Established a platform for instructional courses to provide faculty and students with diversified learning approaches and sent to Ministry of Education for course certification.



■ Held activity of faculty teaching knowledge, ability in 2024.



■ “Media Literacy and Instructional Material Design” Exhibition of faculty social groups courses



■ Digital course teaching video in 2023

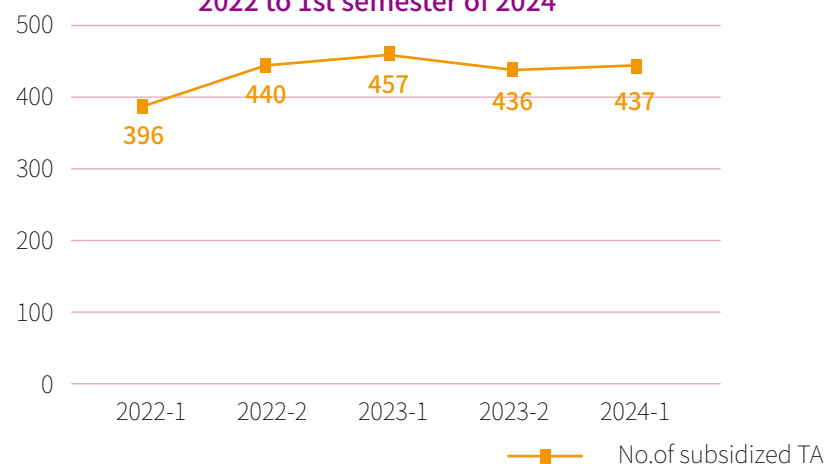




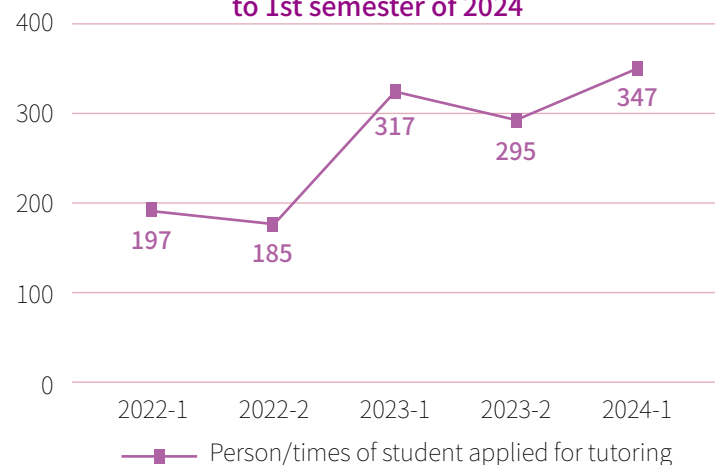
## 5. Teaching Assistant (TA)/tutoring system

Implemented tutoring system and teaching assistant (TA) to strengthen students' learning effectiveness. TA assisted faculty to produce course materials, led classroom discussions and internship activities. Each department recommended outstanding students to serve as peer tutors to provide underclassmen with tutoring after classes to improve their learning effectiveness.

**Number of subsidized Teaching Assistants training from 1st semester of 2022 to 1st semester of 2024**



**Person/times of student applied for tutoring from 1st semester of 2022 to 1st semester of 2024**



## 6. Rewards faculty for teaching excellence

To complete teaching mechanisms and reward teaching effectiveness, this was about to fully promote teaching quality and students' learning efficiency thru "Teaching Evaluation and Recognition Program" annually to acknowledge faculty contributions. One faculty member was rewarded the "Outstanding Teaching Award" every year with a bonus of NT\$240,000 and 18 of them received "Excellent Teaching Award" each with a bonus of NT\$20,000. An annual award ceremony was held to honor these achievements and invite awardees to share their teaching experiences for the inheritance of pedagogical excellence.

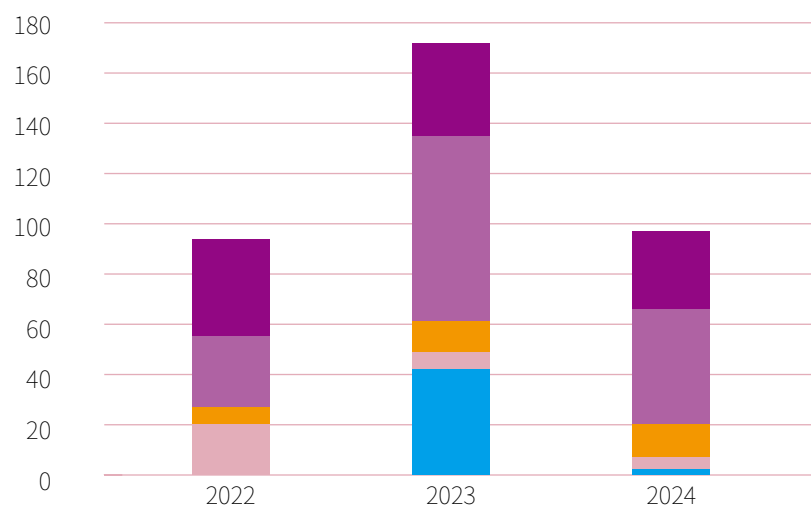


Held the Outstanding Teaching Award recipient-Prof. I-Hsuan, Cheng in 2024



## 7. Awarding innovative teaching courses

Actively assisted faculty to develop innovative teaching courses and integrate diverse teaching methods and contents to keep up with the Higher Education Sprout Project for cultivating students to become interdisciplinary talents with solid academic foundations, humanistic concerns, and mobility. Cored the quality enhancement by revising “Guidelines for Incentivizing Teaching Excellence and Innovation”, “Guidelines for Student Self-Directed Learning” and “Guidelines for Encouraging Interdisciplinary Learning among Students” This encouraged faculty to develop distinctive courses and promote interdisciplinary learning. A total of 97 innovative teaching courses were rewarded, demonstrating the achievement of teaching innovations.



	2022	2023	2024
Subsidies for distinctive and enhanced courses	0	42	2
Off campus subsidy project implemented innovative curriculum	20	7	5
Innovative teaching methods	7	12	13
Self-directed learning	28	74	46
Guest lecturer co-teaching	39	37	31

## 8. Teaching evaluation mechanism

Built a complete teaching evaluation system to ensure teaching quality. The ave. was 95.15% by students' evaluation. 87.11% students involved. Faculty and students noticed this. The whole univ. was 4.52, which reflected teaching satisfaction from faculty every semester in recent three years. This kept enhancing teaching quality by maintaining evaluation feedback.

Semester	2021-1	2021-2	2022-1	2022-2	2023-1	2023-2	Ave.
Total avail. Classes	1520	1429	1482	1420	1440	1308	1433
No. of classes filledout	1460	1364	1402	1324	1372	1259	1364
Evaluation (%)	96.05	95.45	94.60	93.24	95.28	96.25	95.15
Students filled out (%)	91.31	86.4	87.12	85.91	87.42	84.49	87.11
Ave. result of whole univ. evaluation	4.5	4.52	4.5	4.52	4.51	4.54	4.52

## 9. Accreditation for dept. quality assurance

Each dept. promoted the following: self-quality assurance and improvement mechanism, professional features, and teaching quality and international mobility. Entrusted the “Higher Education Evaluation and Accreditation Council of Taiwan” to arrange the quality accreditation for each of colleges/dept./programs in 2022. A total of 26 dept. were accredited. The result was announced in Aug. 2022. All of dept. were accredited. Dept. of Civil Engineering and Dept. of Applied Materials and Optoelectronic Engineering from College of Science and Technology, received their certifications from IEET Accreditation Council with the “Accreditation of Engineering Education, EAC2016” in 2022. The effectiveness-implementation appraisal was held by institutional research development meeting to continuously track the subsequent implementation status of 28 dept. and assist in making following improvements in 2023. Demonstrated the excellence in teaching quality thru accreditation system.

## 2.3 Internationalization

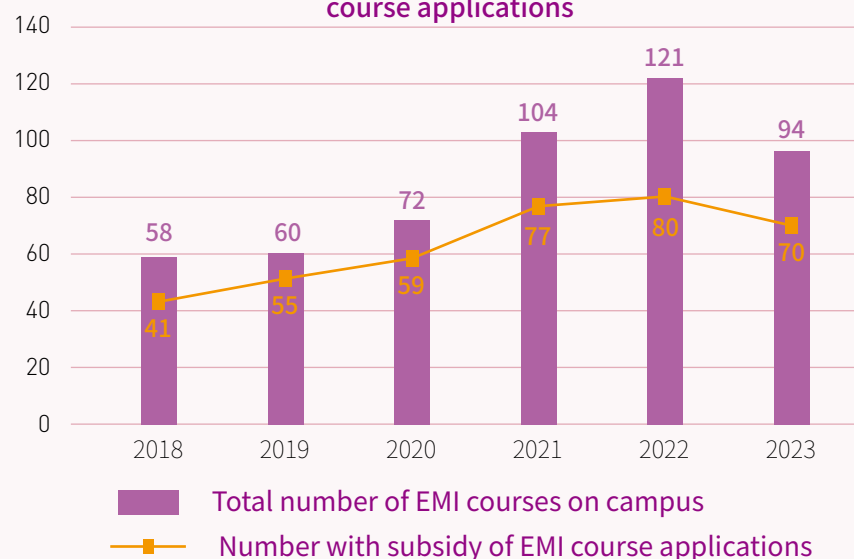
### 1.The implement of bilingual program from Ministry of Education

Received the subsidy of “The Program on Bilingual Education for Students in College, BEST” from Ministry of Education from 110th to 112th academic year, in conjunction with existing bilingual courses thru four aspects of “organization and system”, “faculty and teaching”, “student and learning” and “promotion and quality assurance”. This completed the teaching and supporting system of the “English as a Medium of Instruction, EMI” on campus. In addition, provided students with diversified learning approaches and opportunities, improved students’ English skills, cultivated students with international outlook, and implemented the cultivation of international talents. Achieved the vision of “Improve students’ English skills and cultivate EMI faculty: Moved forward to be an international university”.

### 2. Increased no. of EMI courses

Encouraged faculty to teach classes in English professionally with award methods, such as increasing hour fee or grants on course materials. This cultivated students’ international competitiveness.

Total number of EMI courses on campus & Number with subsidy of EMI course applications



### 3. Faculty training

A group of 12 faculty flew to Macquarie University in Sydney, which was ranked to be one of the globally top 1% universities for a ten day training course on Jan. 22, 2024. This was to improve and strengthen faculty’s professional skills of EMI (English as a Medium of Instruction).

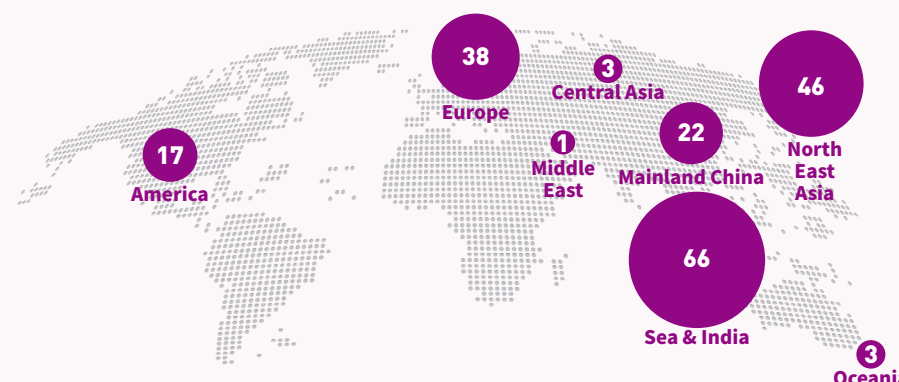


The opening ceremony for the EMI faculty training at Macquarie University in Australia on January 22, 2024

### 4. Enhancing international exchange and collaboration with overseas partner universities

Actively participated in NAFA, EAIE, APAIE, education specialists, bilateral higher education presidents’ forum, summits, and international ranking award ceremonies. Significantly developed overseas partnerships and continued to strengthen partnerships with existing partner universities. The number of partner universities increased from 149 in 2023 to 196 in 2024.

International Partnerships 196



## 5. Promoting students' international mobility

Cultivated students with global outlooks, intercultural understanding, and collaborative abilities that remained NCNU's core spirit of international education. The goal was to cultivate students to be the backbone force of international education. The subsidy program by Ministry of Education supported 97 students for short-term study across Europe, Asia, and America successively since 2022. This accumulated invaluable assets for their career developments in future.



Chien-Jung, Chen, student from Dept. of International Business Studies, took a group photo while participated in study exchange with international friends.

### Examples of international exchange:

**Chia-Wen, Hsieh, Master's student in Dept. of International Business Studies**, who participated in an exchange program at Tama Art University in Japan to cultivate skills for collaboration in diverse cultural environment for the preparation of international workplace in future.

**Yen-Chun, Chang, undergraduate in Dept. of International and Comparative Education**, studied at Universität Osnabrück in Germany for the Global Marketing Management to delve into the core value of German culture and learn the ability of solving problems independently.

**Mei-Ting, Su, Master's student in Dept. of Information Management**, studied at University of Mons in Belgium for IoT technologies. Participated in Erasmus student network activities to build international connections for career development in future.

## 6. The connection of local area and international promotion

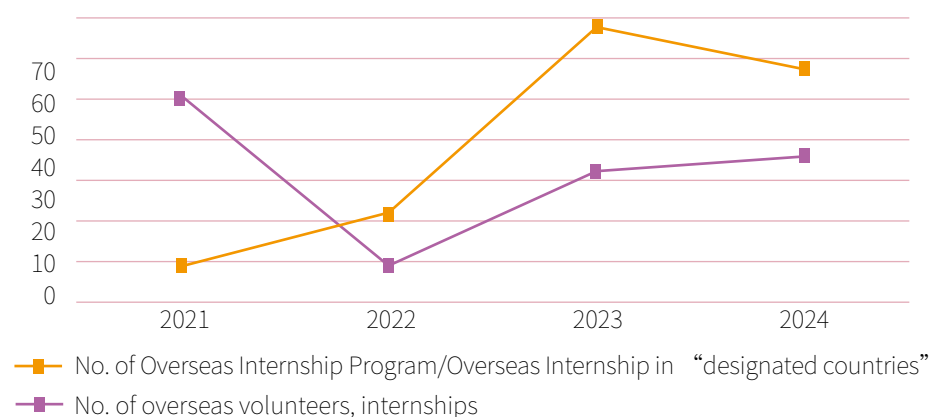
To encourage overseas Chinese students to return home for internship and international volunteer services of domestic students, scholarships and bursaries were offered for both of them every year. Particularly, overseas Chinese students invited domestic students to visit their home countries.

Based on local services in conjunction with overseas professional internships, arranged the experience camp for Taiwan local dialogue and culture. As COVID-19 was slowing down and borders reopening, the number of overseas volunteer services and overseas professional internships gradually increased in 2024. A total of 93 overseas volunteers and professional internship services (14 received subsidies on campus for overseas internships, 22 received subsidies on campus for international volunteer services, 16 were subsidized off campus with Overseas Internship Program, and 41 were subsidized off campus with Overseas Internship in "designated countries.")



Chinese language overseas professional internship

### No. of overseas volunteers, internships, and no. with subsidy from 2021 to 2024



## 2.4 Participation of external organization GRI 2-28

NCNU positively participated in each of interdisciplinary collaborative organizational activities to promote domestic sustainable communication, in hope of becoming the motive force of social progress and development. Below were of current participating organizations:



- Membership: chairman
- External advocacy: positively practiced the “Talloires Declaration” to reach social responsibility and mission of higher education.



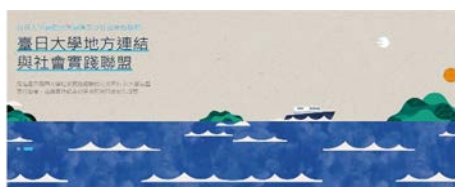
- Membership: director
- External advocacy: promoted communications and collaborations among national universities to improve quality of education, academic research to next level, and international exchange.



- Membership: director
- External advocacy: elected talents, awarded academic research, respected morality and work ethic, and mutual encouragement for the purpose of social progress.



- Signed sustainable development MOU
- External advocacy: climate action, sustainable energy, corporate sustainability, UN's sustainable development (SDGs), and sustainable university



- Membership: founding chairman
- External advocacy: proposed solutions for discussion in response to key social topics and development challenges, such as sub-replacement fertility/aging, rural-urban disparities, local industries development, and community development.



- Membership: director
- External advocacy: strengthened the research of higher education, practice, policy, and promoting the development of higher education.



## 2.5 Information Security (InfoSec)



Sustainable development and InfoSec were inseparable. Not only Information technology (IT) and internet became an important infrastructure for modern organizations to maintain operations as well as promoting sustainable development but also provided innovation and growth with technical assurance. However, as reliance on IT and network increased, so did the InfoSec risk, which it must be regarded as an important topic related to ESG governance level during digitization process to promote organizational resilience as an important strategy. Based on PDCA (Plan-Do-Check-Act) cycle and coordinated with the “Cyber Security Management Act” since 2019, built, operated and continued to improve the Information Security Management System, ISMS. Implemented risk control measures from four aspects, such as organization, personnel, physical infrastructure, and technology to reduce potential risks to confidentiality, integrity, and usability of information asset, thereby ensuring a secure and stable campus IT environment.

### Organizational Controls

#### Promoting Information Security Policy, establishing Information Security Promotion Committee

Promoted information security policy, built a comprehensive four-tier documentation framework of Information Security Management System (ISMS), and guided staff to maintain it. In addition, established Information Security Promotion Committee, consisted of first-tier supervisors among units in providing decision-making, support, and review to ensure it was in line with organizational strategy.

#### Built an InfoSec incident reporting mechanism to ensure timely response.

Established an InfoSec incident reporting contact point and a dedicated InfoSec email to promote incident response speed and reduce potential influences and losses. No cases of information security incidents that were overdue in reporting or response in 2024.

#### Promotion of centralized management of information system to maintain protection performance of overall InfoSec

Promoted centralization of campus information system by migrating them to Computer and Network Center for centralized management. This was to promote overall InfoSec on campus. The centralization rate reached 89.9% as of 2024.

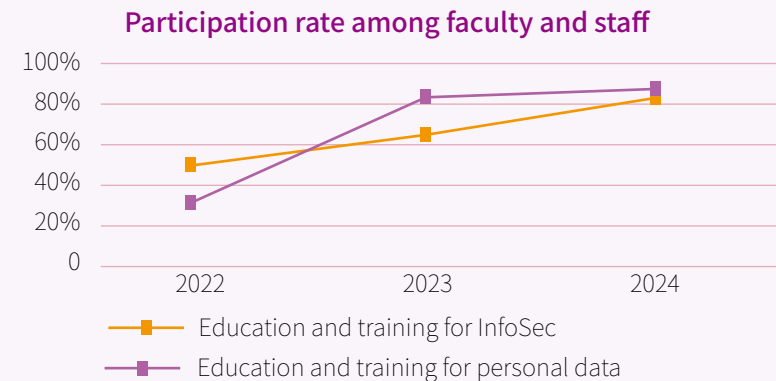
#### Strengthening Personal Data Protection, preventing intellectual property infringement

Implemented Personal Information Management System, PIMS for security management of personal data throughout its lifecycle, including collection, process, utilization, transmission, and destruction. In addition, established rules of prohibition for software infringement thru firewall, preventing the use of unlicensed software or services by faculty, staff, and students to protect intellectual property rights and prevent infringement.

### People Controls

#### Held education and training for InfoSec and personal data to promote awareness, knowledge, and ability.

Held several education and training each year for faculty and staff to promote overall awareness, knowledge, and ability for InfoSec and personal data. Held three education and training for InfoSec and five education and training for personal data in 2024. Participation rate reached 82.3% and 86.5% among faculty and staff respectively (see figure 2.5-1), continued to move toward the goal of 100% participation rate.



↑ Fig. 2.5-1 education and training for InfoSec and personal data, faculty and staff participation

#### Secured protection capability by strong InfoSec team

The team consisted of one full-time InfoSec officer overseeing InfoSec operation on campus and three additional personnel providing managerial and technical supports. Sent related personnel to participate in training courses to obtain professional certifications on a regular basis to promote professional competence. As a result, they held nine valid professional InfoSec certifications and eight certificates of InfoSec vocational training in 2024.

## Physical Controls

### Strengthened data center security controls to build high efficiency stable environment.

Established closed-typed racks and individual modular rack access control systems to achieve hot and cold aisle isolation and optimize cooling efficiency in data center, it equipped with Very Early Smoke Detection Apparatus, VESDA thru the use of Proactive Aspirating Smoke Detection, ASD to allow faster fire-detection compared to conventional smoke detector, improving fire emergency response time. Also equipped with temperature and humidity monitoring, leak detection, power monitoring, and PUE (Power Usage Effectiveness) measurement to achieve continuous supervision and measurement (see figure 2.5-2.) Proactively texted message to maintenance personnel when an anomaly occurred to ensure timely response and process.



Figure 2.5-2 real-time temperature and humidity monitoring, power monitoring, and PUE (Power Usage Effectiveness)

### Built the Silver-level Green Data Center to promote the efficiency of energy use.

NCNU located at an altitude of 665 meters, with average winter temperatures below 20° C. Activated outside air intake mechanism to bring in outside cool air evenly into the data center when temperature dropped below 20° C to alleviate cooling load and promote the efficiency of energy use indirectly, achieving the goals of energy conservation and carbon reduction. The Green Data Center reached Silver-level with the average PUE value at 1.44 in 2024.

## Technological Controls

### Allocated diverse InfoSec tools for management control of campus network service security.

Purchased multiple InfoSec tools, including antivirus software licenses, web application firewall (WAF), and email filtering software to establish diverse defense mechanism that promoted campus network service security. Ensured InfoSec measures against emerging threats thru regular updates and optimization to continuously provide faculty and students with a secure network environment.

### Purchased professional vulnerability scanning service to reduce the risk of InfoSec vulnerabilities.

The purchase of Nessus Professional, a vulnerability scanning service license, not only implemented comprehensive vulnerability scans for core system regularly but also provided each unit with on-demand scanning services in response to their needs or changes in internal/external environments. This reduced the risk of InfoSec attacks effectively after fast in finding and remediation of InfoSec breach.

### Implemented backup mechanism to strengthen data availability.

Collaborated with NCKU by backing up core systems to their data centers while implemented data backup across different data centers on campus. Two universities distanced over 120 KM when implementing off-sites backup strategy. Reached a consensus with universities in Northern area to expand additional off-sites backup centers by the end of 2024 to strengthen data security assurance.

### Implemented InfoSec scanning and device identification tools to check and eliminate hazard products systematically.

Assisted in collecting information on users' computers operating systems, installed software, and KB hotfixes after implemented advanced InfoSec tools to effectively promote the accuracy of asset inventory. In addition, gathered IP addresses and network interfaces of all online devices across network segments on campus automatically then compared vender and country of origin to fast in checking and eliminating potential hazard products against national InfoSec.