



Handbook National Taiwan University

2022 ____ 2023

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Pursuit of Exceptionalism

Message from the President

In the poem "The Road Not Taken," American poet Robert Frost (1874 – 1973) wrote:

Two roads diverged in a wood, and I— I took the one less traveled by, And that has made all the difference.

Frost is likely articulating the dilemma in making lifechanging choices, and the all-too-often human quandary that one has to choose a single path under innumerable yearnings for "the road not taken." While some choices in life are serendipitous, others are resolute, and made only with careful planning.

As a bellwether of higher education in Taiwan, National Taiwan University (NTU) is committed not only to innovative research but also to considering ways of using innovation to aid academic development and social contributions. In this spirit, we deliberately "take" the road "less traveled by" to make "all the difference." To highlight our progress, I will focus on five main areas: talent cultivation, talent retention and recruitment, international connections, research and innovation, and sustainable development.

First, in order to support talent cultivation, NTU seeks to "build a learner-centered open university" by promoting individually designed bachelor's degrees and the Trans-Disciplinary Bachelor's Degree Program. Students can choose and combine courses from among 230 fields of specialization freely. By creating personalized programs, the students break free from the traditional pedagogical system and departmental frameworks to craft a learning path that suits their individual needs. In addition, the "Exploratory Learning Program" provides students the flexibility to choose their learning spaces from both on and off-campus, and immensely expands their domains of study. In addition, the school offers departmental student well-being advisers, student counselors, and the NTU Academic Advising Office. These wellbeing assistance and academic advising resources extensively support students' continuous adaptivity and development.



For talent retention and recruitment, besides increasing funding for new instructors, NTU established the Jade Picking Project and the NTU Core Consortiums, as well as new policies for specialist recruitment to enhance our faculty research capacity. In addition, in recent years NTU significantly increased the number of awards and the amount in bonuses for salaried faculty with exceptional performance. The university raised money to establish the NTU Excellence Chair Professorship and the Chinese Culture Chair Professorship. Moreover, NTU significantly extended new faculty members' eligibility period for university accommodation. These changes help NTU to attract invaluable talents that facilitate our enriched pedagogy and research.

To support international connections, in recent years NTU increased the number of its sister universities to 640 and its dualdegree programs to 114 while constantly updating and promoting strategic alliances with key sister universities. NTU forms cross-disciplinary, international research teams and collaborates with partner universities to award grants to educators and researchers. To encourage students (including disadvantaged students) to pursue international opportunities, NTU established the Voyage of Aspirations Scholarship in addition to offering scholarships to overseas exchange students as well as for dual-degree students. NTU also initiated the International Mentorship Program that is tailored to international students. The program provides internship opportunities for international students to pair up with mentors from a wide variety of fields to gain more practical experience.

For research and innovation, NTU continues to achieve excellent results in a wide range of academic areas, including successfully predicting the demand for ventilators among COVID-19 patients, developing a blood glucose monitoring device that could potentially detect multiple diseases with a single drop of blood, and gaining new insights into DNA replication repair mechanisms. These advances will improve the well-being of people around the world. To encourage interdisciplinary cooperation, NTU promotes a variety of core consortiums, such as a clinical cooperation program that encourages instructors and physicians to work together. The Carbon Neutrality Master Project, meanwhile, incorporates both research and researchers in the fields of low carbon and carbon negative techniques.

Another area of special importance to NTU is sustainable development. Since 2020, the NTU Academic Fund no longer invests in high-pollution or high-emission industries and has implemented responsible investment policies. In 2020, NTU began to publish the annual Social Responsibility and Sustainability Reports. It also announced campus carbon neutrality goals, pledging to reach 50% carbon neutrality by 2028, and 100% by 2048. To achieve these goals, NTU formed the Sustainable Development Promotion Committee. The committee passed a roadmap for reaching carbon neutrality and promotes related research. In addition, NTU was one of the nine national universities to co-found the Taiwan University Alliance for Sustainable Governance, a nation-wide initiative that aims to promote mutual support and assistance among universities to advance sustainable development in Taiwan.

In the poem "Song of the Open Road," American poet Walt Whitman (1819 – 1892) wrote:

Afoot and light-hearted I take to the open road, Healthy, free, the world before me, The long brown path before me leading wherever I choose.

NTU will earnestly follow the "open road" that we choose to "take." In the new era of this post-pandemic world, as the university's centennial approaches, we are confident that NTU will continue to innovate and flourish as we forage forward into a fresh future.

President Chung-Ming Kuan

01 Data NTU

Established in 1928





58 Bachelor's Degree Programs⁵

Branch, NTU Cancer Center Branch

Campus Area **34,151** ha¹.

Note:

16 Colleges⁴

4. Including the International College, D-School, Graduate School of Advanced Technology, Center for General Education, and School of Professional Education and Continuing Studies

Note:

- 5. Including 56 departments and two independent degree programs
- 6. Including 51 combined department/graduate institutes, 57 independent institutes, 34 degree programs, as well as four business administration programs: the EMBA program, the NTU-Fudan program, the Global MBA program, and the Entrepreneurship and Innovation MBA

Sharing of Educational Resources

MOOCs

Over 1.3 million enrollments more than **50,000** course completions



OCW

250 courses more than **18 million** visits



Students **35,043**

Undergraduates (Male) 9,540	Undergraduates (Female) 7,577
Master's Students (Male) 8,460	Master's Students (Female) 5,639
Doctoral Students (Male) 2,579	Doctoral Students (Female) 1,248
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Learning and Lifestyle

The Hope Scholarship grants NT\$ 60,000-100,000 to freshmen in their first year (NT\$ 100,000 to low income freshmen and NT\$ 60,000 to mid-to-low income freshmen and other disadvantaged students in special circumstances). Starting from their 2nd year of study, the students who are in the top 30% of their class in the previous academic year and meet the requirements of course selection regulations may continue to receive this scholarship each academic year (the scholarship would be provided each semester).

Student Associations: 426 26 student dormitories with a total of 12,000 beds

Library Collection

The NTU Library collection contains over 4.3 million physical books, 3.5 million digital books, and 130,000 periodicals (including digital periodicals and open access digital periodicals), as well as more than 600 databases.

NTU Library launched the nation's first automated storage and retrieval system in October 2018. The system provides a high-density storage space sufficient to hold at least 1.2 million volumes. System users can obtain their desired volume within two minutes.

Number of Faculty and Staff



Note: Includes full-time faculty, adjunct faculty, staff, and contract employees





Full-Time Staff (Including Rare Technicians) 589 38%
Contract Employees 972 62%



Global NTU

Social Responsibility



4,020 international students from 89 countries (including international students, students from Mainland China, international degree students, dual degree students, exchange/visiting/shortterm students, and Chinese language students). Every year NTU has over **50** social service teams which are joined by around 1,300 students and serve more than 4,000 people. Service hours surpass **76,000**.



Research Performance

Ranked in the top 50 in nine academic disciplines

Ranking in QS's Five Main Subjects



World University Rankings

2023 Times Higher Education World University Ranking: 187

02 Milestones

0 1895	0 1928		° 1936	0 1937	0 1938	0 1941
On June 18, Taiwan Hospital, the predecessor of NTU Hospital, is inaugurated in Dadaocheng, Taipei.	On March 17, Taihoku (TIU) is established at Taihoku Advanced Aca Forestry. Upon its esta of the Faculty of Litera the Faculty of Science Specialized Faculty of (which becomes an inc 1943 and is renamed T Academy of Agronomy University Library. The Shidehara Taira.	Imperial University the location of the demy of Agronomy and blishment, TIU consists ture and Politics, and Agriculture, the Agronomy and Forestry lependent entity in aichung Advanced and Forestry), and the first president is Dr.	The Faculty of Medicine and the Specialized Faculty of Medicine are established.	In July, the university acquires forested highland in central Taiwan to conduct agricultural experiments at high altitudes. (The NTU Highland Experimental Farm is officially established under the College of Agriculture in 1961.)	NTU Hospital is established.	In July, the TIU Preparatory School is established.
1982	1986	• 1987		1988	1 993	1 995
In November, the university emblem is officially presented at the university's anniversary.	NTU alumnus Dr. Lee Yuan-tseh wins the Nobel Prize in Chemistry.	In August, the College established. In August, the Universi established (in 1999 th with the Night School of Continuing Educatio Development, and in 2 renamed as the NTU S Education and Continu	of Management is ity Extension Center is the center is combined to form the Division in and Professional 017 the school is ichool of Professional ing Studies).	In March, the Student Representative Federation is renamed the NTU Student Association with its president directly elected by all NTU students.	In May, NTU becomes the first university in Taiwan to elect its own president . Dr. Chen Wei-jao, our first president-elect, takes office in June as the ninth NTU president. In August, the College of Public Health is established.	In August, the General Education Commissionis established. (The Commission is reformed the General Education Center in April 1996, and renamed the Center for General Education in Academic Year 2007-2008.)
2007		2008	2013	2015	2016	
In August, the Office of Development, Office of and Office of Financial / In November, the NTU	Research and International Affairs, Affairs are established. Museums is initiated.	In August, the School of Dentistry and the School of Veterinary Medicine are established	In August, the School of Pharmacy is established.	In March, D-School is established.	In March, the Ministry approves the establish System, an alliance co National Taiwan Norm and National Taiwan U	of Education officially ment of the NTU nsisting of NTU, al University (NTNU), Iniversity of Science

and Technology (NTUST).

is completed with a

kind donation from YongLin Healthcare Foundation.

The predecessor of National Taiwan University, Taihoku Imperial University (TIU), was founded in 1928 when Taiwan was under Japanese rule. In 1945, after Taiwan's retrocession to the Republic of China (ROC) government, the university was reorganized and renamed National Taiwan University. However, the history of the university can be traced back to as early as 1895, when the Japanese government set up Taiwan Hospital, the precursor to NTU Hospital, in Taipei's Dadaocheng area.

° 1943	° 1945		0 1947	0 1949		0 1963
In March, the Faculty of Science and Agriculture is divided into two separate faculties. In May, the Faculty of Engineering is established.	On November 15, by orr Yuan, Taihoku Imperial I by the ROC government Taiwan University, with as the first president. U the university consists of Arts, Science, Law, Mer Agriculture), with exten NTU Hospital and NTU body consists of the Off the Office of Discipline the Office of Student Af Office of General Affairs	der of the Executive University is taken over and renamed National Dr. Lo Tsung-lo serving pon its establishment, of six colleges (Liberal dicine, Engineering, and ded facilities such as Farm. The administrative ice of Academic Affairs, and Guidance (renamed fairs in 1994), and the s.	In January, the university merges the Provincial School of Law and Business (formerly the Taihoku Advanced Academy of Commerce) and takes over its campus near Xuzhou Road.	In January, Professor Fu the fourth NTU presiden Fu Garden are both esta In May, the provincial the First Model Forest university. In the follov is renamed the Experin College of Agriculture.	Ssu-nien takes office as t. (The Fu Bell and the blished in his memory.) government allocates Farm to the wing year, the farm mental Forest of the	The Center of Electronic Computing (renamed the Computer and Information Networking Center in 1995) is established.
1997	1999		2000		2002	2003
In March, the NTU Azalea Festival is held for the first time. In August, the College of Electrical Engineering (renamed the College of Electrical Engineering and Computer Science in 2000) is established.	In August, the new Coll established. Departmer old College of Law beco of Social Sciences.	ege of Law is hts formerly under the ome part of the College	In May, the Chupei Ca In June, after the Nati Center relocated, the S established at the cen In October, the prepara Branch of NTU Hospita Branch is officially esta	mpus is established. onal Defense Medical Shuiyuan Campus is ter's former location. atory team of the Yunlin al is established (Yunlin ablished in April 2004).	In August, the College of Agriculture is renamed the College of Bioresources and Agriculture.	In August, the College of Life Science is established.
2017	2019	2020	2021		Since 1	h cours
In December, the NTU Cancer Center (NTUCC) under the College of Medicine	On January 8, Dr. Kuan Chung-ming takes office as the 12 th NTU president.	In November, Launched Future NTU.	In June, due to the CO Council and commence for the first time. In August, the Internat	VID-19 pandemic, the Uni ement ceremony are held tional College and the Gra	versity online duate	Attest S

School of Advanced Technology are established.



03 Campus Learning



Royal Palm Elite Doctoral Scholarship Monthly stipend of NT\$ 40,000 for four years



Cultivating High-Level Talent

Research Promotion Program for Direct-Entry Doctoral Degree Program Students

NTU system students in the Direct-Entry Doctoral Degree Program qualify for a monthly stipend of NT\$ 28,000 for three years. The number of students in the program has risen sharply, reaching more than 150 since the 2019-20 academic year.

Doctoral Scholarships

NTU and the National Science and Technology Council (NSTC) offer NTU scholarships to outstanding doctoral students. Every year, the two institutions offer 53 to 58 recipients a monthly stipend of NT\$ 40,000 for four years. An additional 11 recipients are offered the stipend starting from the 2022-23 academic year. Furthermore, NTU annually provide Diligence Doctoral Scholarship with a monthly stipend of NT\$ 20,000 for three years.

The Xin Miao Key Technology Doctoral Scholarship

Sponsored by Xin Miao Education Foundation, this scholarship has been awarded to local doctoral students since 2019. The student's field of study has to fall within one of six areas: electrical engineering, information engineering, communication engineering, artificial intelligence, biomedical engineering, or sustainable development. Each recipient receives a monthly stipend of NT\$ 30,000 for three years.

Students Enrolled in the Direct-Entry Doctoral Degree Program from 2013 - 2021

Number of students



Increasing Diversity and Attracting Elites

Increasing Diversity

NTU has been pushing for diversity and inclusion via different measures since the 2019-20 academic year. For example, NTU launched the Hope Admission Scheme to admit culturally diverse and economically disadvantaged students. As students admitted via the scheme climbed steadily from 35 in 2019 to 106 in 2022, the project tripled the number of recipients within a four-year span. By utilizing available resources, NTU aims to combine the Hope Scholarship and the NTU Entrance Examinations fees subsidy program to provide additional assistance for disadvantaged students.

Attracting Elites

NTU established the Fu Bell Scholarship and held on-site and online admission events to exchange ideas with students from across Taiwan. Besides aiming to attract the most outstanding students to its halls, NTU expects all admitted students to utilize university resources with utmost efficiency, leverage their strengths in the future, observe the spirit of altruism in society, and realize their dreams. Starting from the 2022-23 academic year, NTU established the NTU Presidential Award, which is aimed at cultivating talent, encouraging student learning, and boosting academic achievement in the undergraduate program. The award is presented to the top 2% of sophomore students in each department. Each recipient receives a scholarship that amounts to full tuition and fees for one academic year. Specific evaluation criteria and screening processes are individually drafted by each department.





Consolidation and Innovation

Undergraduate Honors Program Cultivates Innovative Research Talent

To encourage undergraduate students with research potential to engage in academic research, NTU launched the Undergraduate Honors Program. Students that are sophomores or above who show scholarly interest in academic research may take advanced courses in specific fields designated by the department. In this way, students acquire relevant knowledge to engage in academic research, hone their research skills, and determine their research topics as early as possible. Graduating students who passed specified courses and completed their undergraduate thesis, approved by their respective departments and the Office of Academic Affairs, shall have their degree certificates, full academic transcripts, and other relevant documents annotated with the distinction "Undergraduate Honors Program." Currently, the following 19 departments and schools offer the program: the Department of Clinical Laboratory Sciences and Medical Biotechnology, the Department of Economics, the Department of Sociology, the Department of Finance, the Department of Business Administration, the School of Medicine, the Department of Public Health, the School of Occupational Therapy, the Department of History, the School of Physical Therapy, the School of Nursing, the Department of Social Work, the Department of Engineering Science and Ocean Engineering, the Department of Drama and Theatre, and the Department of Life Science.

Achieving research-teaching integration





Encouraging students to engage in research at an early stage to cultivate future academic talents

The Specialization Program: Building Interdisciplinary Foundations to Unlock Learning Potential

NTU has launched the Specialization Program since the 2021-22 academic year. 56 academic units are offering 230 specializations. Each specialization consists of four to five courses, totaling 12 to 15 credits. Compared with a list-based course selection model, the Specialization Program emphasizes a clear curriculum framework through which each course in the specialization is connected to each other. In this manner, the specialization program provides a clearer guidance for students to explore specific professional fields.

To lower barriers between departments and provide students with diverse and flexible interdisciplinary learning opportunities, NTU encourages different academic units to lift related restraints on course enrollment in the Specialization Program. The specializations have become the cornerstone of the Collegewide and University-Wide Interdisciplinary Bachelor's Programs, which enable students to flexibly integrate various fields of study according to their personal interests and study plans. Students' achievements will be noted on a customized NTU academic certificate that demonstrates students' professional expertise and interdisciplinary learning outcomes to facilitate their career development or studies for a higher degree.

Promoting the Interdisciplinary Credit Program for More Diverse Learning Opportunities

In order to encourage students to take interdisciplinary courses in a systematic way and increase diverse learning opportunities, NTU has offered the Interdisciplinary Credit Program since the 1997-98 academic year. During this time, NTU launched a total of 43 related programs. Besides promoting the establishment of additional programs, NTU aims to conduct periodic assessment reviews to reward programs with exceptional performance and cancel those that are below par.

Promoting the College-Wide and University-Wide Interdisciplinary Bachelor's Programs

1. College-Wide Interdisciplinary Bachelor's Program

With the goal of promoting learner-centered education, NTU launched the College-Wide Interdisciplinary Bachelor's Program. A college seeking to establish its college-wide interdisciplinary bachelor's program is required to submit a proposal and formulate its establishment directives, which shall be passed by the College Affairs Meeting, Administrative Meeting, and the Academic Affairs Meeting. Students, after fulfilling all the course and credit requirements prescribed by the college, are awarded with a College-Wide Interdisciplinary Bachelor's Degree.

The concept of the degree is based on the Specialization Program curriculum. Each college can designate courses and specialization programs (or credit programs/interdisciplinary specializations) as compulsory courses, as well as provide guidance counseling. Students have the liberty to take courses from their own department, another department in the same college, or even cross-disciplinary courses from other colleges. In this way, NTU students can break free from the traditional approach of being pigeonholed in one particular department. The opportunity to take courses from other departments or colleges cultivates a broader range of skills and prepares students for an unpredictable future.

2. University-Wide Interdisciplinary Bachelor's Program

With the goal of promoting learner-centered education, NTU launched the University-Wide Interdisciplinary Bachelor's Program. The degree encourages learners to conduct interdisciplinary self-exploration that internalizes their learning and leverages their creativity and autonomy to design a curriculum tailored to their own scholarly interests, and thereby shape a future full of possibilities. Undergraduate students pursuing a University-Wide Interdisciplinary Bachelor's Program degree must complete at least one specialization program (or credit program/interdisciplinary specialization) offered by a department other than their own or accumulate a total of 12 credits in courses from several specialization programs (including Level 3 courses from interdisciplinary specializations and/or credit programs).

Since the program is akin to a double major, applicants must submit a curriculum proposal that includes planned courses, internships, practicums, or topical courses. In addition, at least four complete specialization programs not all offered by the same college must be included in the curriculum. Students are required to provide a title (comparable to traditional department names) to identify their specific choice of specialization.

The Center for General Education (CGE) is in charge of applications for the University-Wide Interdisciplinary Bachelor's Program. Before submitting their proposal, full academic transcripts, and other pertinent documents to CGE for review, students must set up a meeting with the NTU Academic Advising Office in order to gain a better understanding of their motivations and planning proposals. Upon approval, pending an initial and a secondary review of the application conducted by the CGE review panel, the student may then proceed with the program. Students who fulfill the requirements of their affiliated departments and those of the University-Wide Interdisciplinary Bachelor's Program shall be regarded as having been granted a double major bearing the titles of their departments and their field of specialization.



QR code for the University-Wide Interdisciplinary Bachelor's Program



3. The NTU Academic Advising Office Helps Students Shape Their Futures

For the past few years, students have been admitted into NTU via various channels. As NTU welcomes students from different backgrounds, many of whom demonstrate interdisciplinary orientation and aptitude, the university put forward a series of self-learning programs, such as the Specialization Program and the College-Wide and University-Wide Interdisciplinary Bachelor's Programs, so that students can make their own study plans according to their interests and abilities.

Accordingly, the NTU Office of Academic Affairs established the NTU Academic Advising Office in 2021. Academic advisors assess students' needs and gain insights into their past learning experiences via meetings. Through self-exploration, study plan guidance, and collaboration with peer mentors and industry mentors, the advisors help students to access learning resources on and off campus, make personalized study plans, and provide career counseling. From September 27, 2021, which was the day of the office's inauguration, to July 31, 2022, a total of 375 undergraduates applied for academic advising sessions, accounting for 1.92% of all undergraduates. NTU will further promote the Academic Advising Office in order to elevate its service quality and help students to find their strengths and passions through open dialogue.

Academic Advising Procedure







Service achievement sharing session for service learning and social service teams

Social Responsibility and Service Practice

NTU students are known for applying their knowledge and skills towards caring for the land where they grew up and the people who inhabit it. Some students travel to remote communities to offer assistance. The university offers more than 500 service courses each year and organizes over 50 social service teams to support communities in remote mountainous areas in eastern Taiwan, fishing villages on offshore islands, and overseas locations such as India, Malaysia, and northern Thailand. The teams contribute to recreational activities, health care, tutoring, environmental protection, and sustainability. To promote students' efforts to bring the spirit of service to remote communities at home and abroad, NTU provides professional and remote community service subsidies and supports long-term extended projects to specific communities.

Every year, NTU offers over 500 service-learning courses and organizes more than 50 social service teams





2021 Social Devotion Special Award winner Lin, Yu-hsuan "Telling Stories Around the Island"



President Kuan presented the Social Devotion Special Award to Tang, Wei-lun during 2021 NTU anniversary ceremony



A sharing session of the Dream Field Comprehensive Support Program

The Social Devotion Special Award and the Altruistic Award are set up to commend altruism in students who value their social responsibility and tirelessly devote themselves to the well-being of others, especially the disadvantaged. Here are the winners of the 2021 Social Devotion Special Award:

Political Science major Lin, Yu-hsuan initiated the project "Telling Stories Around the Island – Prevention of Sexual Assault by Acquaintances," which involves reading picture books and playing games at elementary schools in remote communities across Taiwan to teach school children about the autonomy of their own bodies and the prevention of sexual assault by acquaintances.

Biomechatronics Engineering major Tang, Wei-lun is committed to preserving and advancing traditional languages in Taiwan. He collaborated with the Ace Family team to organize workshops and summer camp activities based on the island's languages and cultures. By conducting long-term field research and organizing camp activities, the team hopes to help children learn more about their own cultures and heritages.

NTU Star Rain is an NTU student club that has existed for 30 years. Its mission is to foster a community network to support autistic children. Club members visit children at home, track long-term progress of individual cases, organize camps and activities, babysit autistic children, and help to ease the pressure of parental care.

To assist economically or culturally disadvantaged students on their academic journeys, NTU initiated the "Dream Field Comprehensive Support Program." Students are able to seek for various support via an one-stop online application. The program aims to enable students to equip with four core abilities, Leadership, Employability, Physical and mental health, and Multicultural competence.



During the university's anniversary celebrations in 2021, President Kuan presented the Social Devotion Special Award to members of NTU Star Rain



VISION 2022 NTU Campus Recruitment Fair



VISION 2022 NTU Campus Recruitment Fair



Diverse Competency Development Courses



Diverse Competency Development Courses

Cultivating Students' Diverse Career Skills and International Perspectives

To equip students with critical workplace skills and enhance their competitiveness, NTU devised a learning framework for students' career development. Besides career aptitude evaluations and guidance, diverse competency development courses and programs essential for interdisciplinary and international talent are made available to the students. NTU also organizes campus career fairs, visits to potential employers, and company information sessions to help students find employment or enroll in internships. A total of 1,408 students participated in these events in 2021.

The Global Initiatives Symposium in Taiwan (GIS Taiwan), established by NTU, is Taiwan's largest international student academic forum. This annual five-day event brings together scholars in various fields, business leaders, and student representatives from across the world. The forum offers global leaders and students a cross-border, interdisciplinary, generation-spanning exchange platform that encourages interaction among industrial, governmental, and academic



organizations. The aim is for students to join in-depth discussions on global issues and propose action plans for real solutions. Young participants from around the globe are able to stand on the shoulders of giants, and students from Taiwan gain opportunities to connect meaningfully with the rest of the world.

Student Well-Being Specialists and Innovations in Academic Advising

Resident student well-being specialists are available on campus to provide primary prevention services. The principal mission of these specialist counselors is to offer consultations on adapting to campus life and refer students to on- or off-campus resources once their needs have been identified. The specialists also aim to improve the overall quality of the counseling network. Beginning from the 2022–23 academic year, a total of six resident student well-being specialists will be assigned to the College of Liberal Arts, the College of Science, the College of Social Sciences, the College of Bio-Resources & Agriculture, the College of Management, the College of Electrical Engineering & Computer Science, the College of Law, and the College of Life Science.

NTU also instituted an innovative academic advising system with three integrated segments: department-level student well-being advisors, advisors communities, and student care counseling. First, departments or graduate institutes appoint the student well-being advisors and organize workshops and training sessions to strengthen the university's overall student well-being network. Second, advisors form their own communities to promote peer learning, mentorships, and shared growth. Third, student-care counseling stems from various sources, such as department heads, department-level student well-being advisors, counselors from the Student Counseling Center, or resident student well-being specialists, and each can offer individuals or groups of students specific advice on coursework, learning, interpersonal relationships, and careers.



"Midterm Good Luck" Counseling Week



Training workshop for student well-being advisors

GIS Taiwan – Startup Carnival





Stanley Wang D-School @NTU

D-School

The Stanley Wang D-School@NTU (D-School) is committed to inspiring our society to undertake changes for a better and brighter future. Since its establishment in March 2015, the D-School has promoted education focused on innovation and creativity with the goal of building a learners-centered interdisciplinary environment for teaching and research. In August 2021, the D-School was transformed into a functional college that is both teaching- and research-oriented, with "Innovation, Entrepreneurship, and Creation" as the hallmarks of its development. Having been given the role of an experimental sandbox in teaching and research for Future NTU, the D-School established the "Trans-disciplinary Bachelor Degree Program" to bring together both R&D and innovative courses and programs from NTU's various colleges and units, with the objectives of adapting to current trends and a changing world, as well as cultivating talent that spans many different disciplines.



The welcome party of 1st Trans-disciplinary Bachelor Degree Program



"Active Ageing in Place: Home Culture", collaborating with National Theater and Concert Hall, Taipei (Photo provided by National Theater and Concert Hall, Taipei)

Innovation



The collaboration of music creation between interdisciplinary students



Thematic Practice-Oriented Educational Design Focuses on Interdisciplinary, Cross-College and Cross-Border Collaboration with Core Design Thinking

The D-School's interdisciplinary and innovative courses aim to cultivate students' ability to learn effectively. Apart from providing a series of courses in core design thinking, we also continue to work with NTU faculty, as well as instructors from other institutions and industry across different disciplines, to develop and design extended courses in core competence as well as topic-centered courses. For example, in "The Elementary Forms of the Social Design," students are encouraged to consider how sociological concepts relate to their bodies, experience the objects of society with both feet, and facilitate the transformation of networks with both hands. In "Food Design and Social Innovation," students discuss how the brewing, production and consumption of beer promotes interaction between different social groups, and also think about how food design promotes social innovation in the post-epidemic era. In "Designing Experiences Within Living Landscapes," students learn and redesign tactile experiences in daily living through the design of objects. In "Changing Museum Practice of Living Culture", students explore the meaning of creative museum practices and how these shape local social life from a postmuseum perspective. In "Music Design and Innovative Application", students contemplate ambient sounds and listen from different perspectives, so as to realize the diversity and artistry of music. Meanwhile, in "Principles and Practices of Global Innovation," students connect to the world directly without ever having to travel abroad. As a collaboration with the University of Southern California, with participation from iPodia Alliance and a number of well-known universities around the world, this course also serves as an example of classrooms without borders, providing students with cross-border, multicultural and interdisciplinary learning opportunities and practice venues. D-School eliminates the traditional barriers between different colleges and enables students from different departments to discover their unlimited potential by breaking out of existing ways of thinking.



"Leadership Lectures", collaborating with Taiwan Women on Boards Association





Industrial Practice and Industry Instructor Teams Help Students Achieve Social Impact

To cultivate students' entrepreneurship and leadership, the D-School brought together the university's two most active credit programs: the NTU Creativity and Entrepreneurship Program and the NTU Leadership Program. The former builds upon the foundation of entrepreneurship and aims to cultivate students ' ability to facilitate learning and practice while demonstrating creativity and an entrepreneurial spirit that defies failure. The D-School also promotes on-campus learning and practices related to creativity and entrepreneurship while providing guidance to students, encouraging them to transform creativity into entrepreneurial actions and to plan and build a solid foundation for their future careers. Student teams have come up with many terrific ideas. For example, the Biodestic team employs enzymes to dissolve thin plastics; the Urocket university major exploration accelerator team shares knowledge about academic majors through consulting, the ChariKey team finds ways to track how funds from every donation are utilized so that a bridge of trust can be built between donors and charitable organizations; the Foodeats team designed fun interactive desktop games to teach users about the cultures and peoples in Southeast Asia through cuisines; and the Tâi-uân-uē team developed the country 's first interdisciplinary Taiwanese learning game package called "Tiger Master Caterer," which successfully achieved its goal on a crowd-funding platform. The NTU Leadership Program, meanwhile, provides systematic leadership training in soft power, an all-around interdisciplinary curriculum, and topic-based real-world practical experience. Program objectives include cultivating problem-solving and team leadership skills, strengthening students ' leadership and team cooperation to serve society, and expanding practical experiences that exert a positive influence. The Leadership Program offers up-todate and sophisticated specialty courses. For example, "Critical Thinking and Problem Solving," which admits less than 10% of applicants, teaches problem-solving skills to tackle unfamiliar problems, making it a cornerstone of diverse career development for the future. "Leadership Lectures", which boasts an ensemble of guest lecturers who are heavyweight industry leaders, is held in collaboration with the Taiwan Women on Boards Association. It shares speakers ' practical experiences in the workplace to help students gain an understanding of industry trends and to expose them to a diverse selection of employment options available in the future. Students are also provided with internship opportunities so that they can gain practical experience while in school to prepare for their future professional careers. In the post-pandemic era, young people in Taiwan apply their digital expertise to connect with communities worldwide. Yu-chen Wang, a student enrolled in the NTU Leadership Program, and her partners founded "Refugee Network Taiwan", which teaches English to refugees online so that they will have the courage to turn things around despite having to live with very limited resources. Since June 2021, English online courses provided by "Refugee Network Taiwan", in collaboration with the University of Aleppo in Syria, have matched 115 university students with 89 volunteer English teachers, and together they have spent a total of 1,068 hours on lessons. The team won the "U20 International Youth Forum" Most Influential Award and represented NTU at the ESG Summit and Asia-Pacific Forum & Exhibition for Sustainability, setting an example for students who aspire to promote sustainable development.



"Ritual, Scenario and Design", collaborating with an indigenous tribe

Creation

Experience-Based Courses, Co-learning Venues, and Innovative Communities

The D-School values social innovation design and universities' social responsibility. With the NTU Plus Program adopting the mission of "Interdisciplinary teaching in the field," NTU has developed practical, field-oriented courses, which have had attendance of more than 6.000 students in nearly a hundred courses and workshops taught by dozens of teachers. Generally, to help a community innovate, except moving into that community. A more efficient way, however, is to turn NTU into a platform where participants can locate needed resources while matching with collaborators. Users are also able to establish collaborative relationships via flexible arrangements that are based on their personal requirements. In the process of solving urban and rural development problems, the platform links different community issues to related curriculum knowledge and practical experiences, then shares these advances. In addition, to support practical field cooperation in various locations, including Pingxi (New Taipei City) as well as Shen'gou and Nan'ao (Yilan County), since 2018 NTU Museums have joined forces with counterparts in New Taipei and Yilan, as well as local senior high schools, vocational high schools and local organizations, to offer experience-centered, ex-situ teaching and remote field co-learning courses. These provide an organic network platform for co-learning and co-creation to people aiming to implement the guality education goal in the UN's Sustainable Development Goals. Moreover, a textbook designed for these purposes and entitled "Basics for Field Research" was published in 2022.

Future

A Diverse Experimental Action Program Encourages Intrepid Students to Realize their Educational Goals

The D-School began to gather ideas and recommendations in 2019 regarding the future of university education from faculty members, staff, students and alumni via interviews, workshops, forums and other avenues. In 2021, these findings contributed to the D-School publishing "The Future NTU White Paper", which takes a "Learner-Centered Open University" as the starting point for creating a brighter future. According to this publication, Future NTU requires a "break and build" approach: "breaking" the status quo to allow more flexibility and openness, and "building" an organizational culture and network that centers on learners by transforming the university. The D-School and the Office of Academic Affairs have jointly launched a variety of experimental action plans for Future NTU, including the Exploratory Learning Program, the Trans-disciplinary Bachelor Degree Program, Design Your Own Courses, various specialization programs, and the Academy of Industry. These programs dispense with traditional academic frameworks and offer learning modules that make it easier for students to find their learning objectives and directions. The students then develop their own interests and expertise in a more flexible way, and create learning modules suited to their particular needs. Benefits that include growing in a more adaptive manner and mastering interdisciplinary knowledge pave the path to a brighter personal future.



Design your own courses



Exploratory learning



Live online show of D-Camping as the theme in D-Day end-of-term sharing session

D-Day's Record-Breaking Online Event – We're Having Fun and You're Invited!

Facing the pandemic, end-of-term student exhibitions at many colleges and universities were canceled. NTU's D-Day end-of-semester exhibition, however, still brought together students' achievements from courses taken at D-School. For example, the "D-Bookstore" event was brought online using the Gather Town platform during the Spring 2021 semester. The event broke the national attendance record for highest number of simultaneous online participants, a legendary status still difficult to surpass. During the Fall 2021 semester, "Life Museum" was the theme employed to record the progression of the course and to collect, display and exchange classmates' musings on life. The teaching and learning of interdisciplinary design enabled by D-School embodies how faculty and students can establish a field-oriented thought process to conduct dialogues and interactions in various spaces for learning, as well as practices in the cycle of thinking and doing. Going from the exchange of stories to writing one's own history, this rich experience in exhibition curation circumvents the restrictions of space and distance, thus creating a coexisting virtual reality and dialogue for the post-pandemic future. During the Spring 2022 semester, "D-Camping" was employed as a theme to symbolize D-School's core value of "having fun." Let's have fun together on D-Day!



Teachers happy to see students' creatives at D-Day



The Future NTU White Paper



D-School

04 Top Research





Percentages of NTU Scholarly Output (Classified Based on QS' 5 Faculties of Academic Disciplines) That Conform to the UN's Sustainable Development Goals (SDGs)

Arts & Humanities Social Sciences & Management Engineering & Technology Life Sciences & Medicine Natural Sciences



Data source: Scopus; based on literature statistics compiled between January 1, 2018, and June 1, 2022. Last updated: June 13, 2022.

Number of NTU Scholarly Output Published and Citations over the Past 11 years







Note: The figure for 2021 papers refers to those published between January and December 2021. Last updated: March 10, 2022.

NTU Core Consortiums

Enhancing Research Capacity

Following the spirit of a seed program that solicits external resources, the NTU Core Consortiums program encourages faculty members to cooperate towards building core research capabilities. Yearly increases in the number of sanctioned projects has effectively injected more resources into NTU and further boosted our research capacity.

Passing the Academic Torch

Senior faculty members mentor their younger counterparts in order to cultivate new research talent. As more assistant and associate professors lead projects, teams grow and new generations take the helm.

Encouraging Interdisciplinary Collaboration

We regularly organize research seminars and solicit proposals to promote the study of core research topics. In 2021, we promoted clinical collaboration by encouraging faculty and physicians to cooperate on relevant clinical projects. In 2022, we promoted research on carbon neutrality by encouraging faculty members to focus on topics such as low-carbon transition, environmental sustainability, energy conservation, and carbon reduction. Many interdisciplinary teams formed in response.



No. of Projects Implem	ented by Year
No. of projects implemented, currently being implemented for the indicated year	No. of master projects
2018	30
2019	41
2020	36
2021 (Including clinical collaborations	43
2022 (Including clinical collaborations	48

Percentage of Assistant Professors and Associate Professors Acting as Project Hosts, by Year

Percentage





Over 67% of NTU Research Papers are Published in the Top 25% of Journals in Their Respective Disciplines

■ Q1 (top 25%) ■ Q2 (top 26%-50%) ■ Q3 (top 51%-75%) ■ Q4 (top 76%-100%)



Data source: Scopus; based on literature statistics compiled between January 1, 2018, and June 1, 2022. Last updated: June 13, 2022.

NTU Academic Research Career Development Projects (Sprout Research Projects)

These programs aim to motivate scholars to commit themselves to long-term original research focused on topics in important fields of studies, to realize their full research potential, and to strive for leading positions in pioneering these disciplines.

For the first time an online interdisciplinary forum was held in 2021. The purpose was to promote collaboration between the principal project investigators and newly recruited faculty members, and to stimulate innovation in research. Senior faculty members were also invited to share their research journeys and experiences. A total of 150 faculty members participated in the event, including 34 principal investigators of Sprout Research Projects who shared the results of their research efforts. The event consisted of four online conference rooms, one for each field of study, with discussion of wide-ranging and exciting research topics. The forum was a tremendous success.

In 2022, we worked with NTU Core Consortium to solicit projects on carbon neutrality. To promote our solicitation, we held an information session, during which there were a great number of lively and enthusiastic discussions. The meeting would hopefully spur interdisciplinary collaboration and original research on energy conservation, carbon reduction and other related research areas.





New and Experienced Researchers Account for 77% of All Principal Investigators



No. of Projects Implemented over the Years by Discipline



Technology Transfer Results

Since 2016, we have supported the government's policy to encourage the creation of business startups derived from university projects. As of 2022, we have spawned a total of 28 new startups. On average over the past three years, business enterprises have transferred and commercialized technology from 168 NTU-generated R&D cases per year.

NTU persistently adheres to the spirit of giving back to the society. A research team from the College of Bioresources and Agriculture licensed its pineapple sugar-apple (atemoya) long-haul storage and transportation technology royalty-free to fruit exporters selected by the Council of Agriculture to counter mainland China finding faults and banning fruits imported from Taiwan. Since the technology doubles the shelf life of fresh pineapple sugar-apples, over 90% remains sellable upon reaching the target markets via affordable sea transport. The fruit's extended shelf life, which can be as long as five to seven days, greatly increases its commercial value. The efforts of NTU's R&D, in support of the Council of Agriculture's policy to aid struggling fruit farmers, help expand the export market of pineapple sugar-apples and fulfill NTU's university social responsibility (USR).









JAMA Internal Medicine, 181(7), 913-921.



Combination of Case-Based and Population-Based Interventions May Explain Success of COVID-19 Control in Taiwan

Professor Hsien-Ho Lin and his research team from the NTU College of Public Health joined forces with the Epidemic Intelligence Center (EIC) of the Taiwan Centers for Disease Control (CDC) to study the transmission dynamics of COVID-19 in Taiwan and evaluate the effectiveness of associated interventions. This comparative effectiveness study used a stochastic branching process model to analyze the COVID-19 epidemic data of 158 confirmed cases from Taiwan in 2020. The study found that an estimated 55% of the transmission events occurred during the presymptomatic stage, and the average incubation period and serial interval were both around five to six days.

After conducting forecasts and evaluations, the research team found that the reproduction number (the number of secondary cases generated by one primary case) of COVID-19 cases without any intervening measures was estimated to be 2.50. When limited interventions were implemented, the reproduction number was estimated to decrease by 39% from 2.50 to 1.53 (case-based interventions) or by 48% from 2.50 to 1.3 (population-based interventions). However, the study also found that, an exponential increase of the epidemic curve could not be suppressed. As a result, Taiwan would likely still see at least 30,000 new cases with case-based interventions or 400 new cases with population-based interventions on the 60th day of a potential outbreak.

However, when combining case-based interventions (case detection, contact tracing, and quarantine of close contacts) and population-based interventions (wearing of facial masks and social distancing), the reproduction number was estimated to fall to 0.85, where there would only be 1.7 new cases on the 60th day and zero new case on the 84th day of a potential outbreak. These research findings, which were an important basis for the government's epidemic control planning and decision-making process, were published in the international journal *JAMA Internal Medicine*.

Research Team Led by Professor Chun-Liang Pan at the Institute of Molecular Medicine Discovers Mechanisms of Memory and Learning Under Cellular Stress

A research team led by Professor Chun-Liang Pan of the Institute of Molecular Medicine found that when nematodes are confronted with cellular stress, they can induce memory and learning behaviors via serotonergic circuits. Their paper publishing these findings can be found in a recent issue of the well-known U.S. scientific journal *Proceedings of the National Academy of Sciences (PNAS)*.

By inhibiting mitochondrial respiration to generate intracellular stress, Professor Pan's team induced the nematodes to connect "harmless bacterial odor" with "cellular pressure." After both conditions occurred simultaneously, the nematodes then exhibited avoidance behaviors towards bacteria, a pattern comparable to that of classical conditioning. A type of aversive learning crucial to an organism's survival in nature, this learning behavior is also similar to what the proverb "once bitten, twice shy" conveys: a snake-bite victim could become wary of any object that resembles a snake.

Prof. Pan's team further discovered that the NSM neurons of *C. elegans* increase the synthesis and secretion of serotonin in its initial exposure to stress, which is related to the formation of memory. The serotonin released by NSM binds to SER-4 serotonin receptors on the RIB interneurons, giving RIB the ability to evoke memory. This type of circuit mechanism, which is controlled by different nerve cells for various aspects of memory, is comparable to the memory mechanism in mammals. It is worth noting that due to the tiny size of *C. elegans*, Prof. Pan's team placed the nematodes into microfluidic chambers and employed high-sensitivity calcium imaging to capture fluorescent images of the responses of the nematodes' nerve cells to bacterial odors. The results indicate that mitochondrial stress causes novel responses of NSM and RIB neurons to bacterial cues, which suggests that memory and behavioral plasticity result from changes in neuronal activity.



Proceedings of the National Academy of Sciences, 119(11), e2115533119.





Nature Communications, 13(1), 1256.

CCMS Team Led by Dr. Li-Chyong Chen Discovers Edges of Monolayer 2H-WSe_2 Can Be Used for Photocatalytic Fuel Conversion

The green energy industry has in recent years been identified by the world's developed countries as one of the key foci of development for the future. The development of new energy sources is pivotal in the ongoing energy revolution. In addition, the Earth's increasing greenhouse gas emissions are an impending challenge for the current generation. Scientists therefore have begun to study the photocatalytic reaction of carbon dioxide, with the hopes of using solar energy to convert carbon dioxide into energy-producing chemical fuels. This will not only reduce greenhouse gases, but also generate an all-new type of renewable energy.

A research team led by Prof. Li-Chyong Chen, a researcher at both the Center for Condensed Matter Sciences (CCMS) and the Center of Atomic Initiative for New Materials (AI-MAT), has synthesized monolayer tungsten diselenide (WSe₂) artificial leaves using a low-pressure chemical & vapor deposition system. By adjusting the synthesis conditions, the growth of the lateral size of the WSe₂ can be controlled precisely and distributed uniformly on the substrate. If applied to photocatalytic reduction of CO₂, methane (which is the main constituent of natural gas) can be produced and utilized as a chemical fuel. The conversion efficiency is inversely proportional to the size of the synthesized WSe₂, which indicates that the smaller WSe₂ the better the catalytic ability. The internal quantum efficiency can reach a maximum of 0.23%.

Using atomic force microscopy-scanning electrochemical microscopy, Prof. Chen's experimental research team was able to conduct nanoscale redox mapping of the materials. In collaboration with the theoretical team, which performed density functional theory (DFT) calculations, they discovered that while the planar surface of transition metal dichalcogenides is extremely inert, the atomic structure reconstructed at the edge of the WSe₂ material, or through defect engineering, does have exceptional CO₂ adsorption capacity and improved catalytic performance.

Their research findings provide a clearer direction for the design of catalyst materials in the future, and it is hoped that in time commercial products based on this research will become a reality.

NTU Hospital's Interdisciplinary Research Team Boosts Forensic Identification Accuracy to 97% with an AI Model That Holds Potential Applications to Cancer Research

To solve the difficulties encountered in the DNA sequencing of mixed samples that are extremely small and to improve the accuracy of identifying individuals with DNA sequencing in forensic identification, Dr. Hsiao-Lin Hwa from National Taiwan University Hospital joined forces with Prof. Eric Y. Chuang and his team from NTU Graduate Institute of Biomedical Electronics and Bioinformatics to conduct an interdisciplinary research project, from which a new artificial intelligence (AI) model has been developed. They pioneered the use of a deep learning pipeline with next-generation sequencing (NGS) data as the basis for testing forensic samples in order to analyze and identify individuals from the DNA samples. In a sample mixture, this AI model is capable of distinguishing major and minor contributors and accurately determining individual identities.

To confirm the feasibility of this AI model, the research team performed simulations of scenarios that actually occur in criminal cases, and prepared mixtures of DNA samples with different ratios for identification purposes. For example, mixing the DNA samples from the perpetrator and the victim with a 1:39 ratio yielded accurate predictions across different experimental groups. The team also attempted to mix DNA sequencing data from three different individuals and prepared the mixtures with sequencing quantities in different ratios, such as 9:9:1 or 9:1:1. After mixing, the AI model was still able to correctly identify the different individuals, with the individual identification accuracy rate of up to 97%.

In addition, to verify the general applicability of this AI model, the research team applied whole-exome sequencing (WES) data from breast cancer patients to successfully classify postmastectomy patients into triple negative breast cancer (TNBC) or luminal A subtypes.

The research results were published in *Briefings in Bioinformatics*, an internationally renowned top ranking journal with an impact factor of 13.99, and follow-up research is also underway. It is expected to make important contributions to criminal investigation and cancer treatment.





05 Global NTU



NTU Summit of Foreign Representatives in Taiwan

Increasing the Quality of International Collaborations

Launching the Strategic Partnership Project

Having established sister university relationships with 639 universities worldwide, NTU is focusing on strengthening these international partnerships and increasing the quality of collaborative academic research. We have already enhanced ties with eminent universities like the University of Illinois Urbana-Champaign, the University of Sydney, the University of Tokyo, and Kyoto University. We organize matchmaking events and provide the groundwork for the initial funding of cooperation projects, thereby broadening international partnerships. We establish grants for international exchanges and cross-disciplinary research teams, encourage students and faculty to further their academic knowledge via mutual interaction, and help solve pressing issues affecting modern societies. Even throughout the pandemic, we have persisted in working alongside elite educational institutions and foreign representative offices in Taiwan, leading to events such as the 2022 NTU Global Partnerships Summit, where 84 diplomatic representatives, offices, and academic institutions from 28 nations gathered to exchange ideas on cooperation, international student admissions, and cross-border research collaboration.

Joining International Higher Education Organizations

For greater international visibility as well as stronger academic and social impact around the world, NTU is strengthening ties with international organizations such as APRU, AEARU, ASAIHL, and SATU. Moreover, it joins with partner universities to develop presentations for annual conferences of international higher education organizations such as APAIE, AIEA, and NAFSA. NTU also collaborates with AEARU to launch online classrooms, which facilitate interactions among teachers and students of member universities. Within Taiwan, NTU holds the highest number of memberships in international higher education organizations. The creativity and flexibility displayed by NTU in its international exchanges caught the attention of Minerva University, an innovative and experimental campus-free university. It has collaborated with NTU to make Taipei one of only seven global cities where Minerva operates.

Strengthening Students' International Mobility, Cultivating Global Talent

Diversifying Study Abroad Channels

Cultivating a global perspective for students is crucial to NTU. By offering nearly 694 exchange student programs across 50 countries, NTU annually sends around 1,300 students abroad for exchange or short-term study programs or internships. This means that nearly a third of the student body spent time overseas before graduation. These programs not only strengthen the effectiveness of student exchanges, but also serve as practical channels for professional training while improving foreign language proficiency. NTU collaborates with prestigious universities to offer around 104 dual-degree and triple-degree programs while developing diverse co-learning models such as GIP-TRIAD. Furthermore, various overseas summer programs enable NTU students to study and conduct research during their summer vacations at esteemed universities such as Stanford University, the University of Oxford, and Heidelberg University. Participants can complete comprehensive academic training while experiencing diverse cultures.

Encouraging Students to Pursue Their Dreams Abroad

To broaden students' international perspectives and experiences, facilitate academic and cultural exchanges with higher education institutions across the globe, and cultivate internationally competitive talent, NTU hosts multiple dedicated projects and grants. For example, the National Taiwan University Voyage of Aspirations Scholarship was launched in 2019 to open more doors for disadvantaged students to join exchange programs. With such support, the financial burden of studying abroad is greatly mitigated, so that students can focus on developing their international competitiveness and freely explore potential opportunities on the international stage.

In addition, the Y.L. Lin Hung Tai Education Foundation – NTU Project provides Y.L. Scholarships to nurture talent in Taiwan. By encouraging students to design the courses as well as participate in on-site practices, we aim to nurture proactive students with ambitious long-term vision and a commitment to contributing to Taiwan's development. Such financial support enables the students to smoothly study abroad and acquire the capabilities needed to execute and actualize their projects after returning to Taiwan.





Diverse International Courses to Attract Foreign Students

Increasing Enrollment Despite Pandemic Restrictions

Owing to limitations caused by the pandemic, NTU moved its participation in international educational exhibitions and student enrollment and orientation activities online. Furthermore, to increase engagement with international students abroad, the university created VR venues and a user-friendly web page designed to offer a space where students can easily access all necessary information regarding enrollment and admissions. NTU's efforts in this regard attracted even more application inquiries from international students during the pandemic.

Courses and Academic Programs Fully Instructed in English

As of 2022, the following 17 departments, colleges, and programs of NTU offer their courses entirely in English:

- 1. Taiwan International Graduate Program on Earth System Science (PhD Program)
- 2. Translational Medicine Program (PhD Program)
- 3. NTU GIP-TRIAD Master's Program in Food and Health
- Taiwan International Graduate Program for Molecular Science and Technology (PhD Program)
- 5. Taiwan International Graduate Program for Sustainable Chemical Science (PhD Program)
- 6. Department of Agricultural Economics
- 7. Institute of Biotechnology
- 8. Global MBA Program
- 9. The Global Health Program (Master's Program)
- 10. The Global Health Program (PhD Program)

- 11. Taiwan International Graduate Program for Bioinformatics (PhD Program)
- 12. Taiwan International Graduate Program on Artificial Intelligence of Things (AloT) (PhD Program)
- 13. Institute of Biochemical Sciences
- 14. Taiwan International Graduate Program in Interdisciplinary Neuroscience (PhD Program)
- Master's Program in Global Agriculture Technology and Genomic Science (Global ATGS)
- 16. Master's Program in Biodiversity (MPB)
- 17. Master's Program in Smart Medicine and Health Informatics (Smart MHI)

Our university offers other doctoral programs together with Academia Sinica that are instructed in English, including the International Graduate Program of Biochemistry and Molecular Biology, and the International Graduate Program of Nanoscience and Technology. Additionally, 41 NTU departments, colleges, and programs offer international students enough courses taught in English to complete a degree. In order to emphasize the sustainability of English-only courses and programs at NTU, several bachelor's programs, scheduled to start in 2023, are being designed to provide international students with fundamental knowledge in their desired fields. These include the International Bachelor's Program in Smart Engineering Technology and the Bachelor Program in Biotechnology and Food Nutrition.





In 2021, NTU established the International College to better train our foreign talent in interdisciplinary fields and provide opportunities to work in relevant industries. The International College not only builds its academic programs around collaboration between colleges and disciplinary areas, but also emphasizes students participating in practical internships in Taiwan and abroad. Four International College master's degree programs are approved, including some that are already established and recruiting students. Another program under review is the Master's Program in Political Economics and Chinese Civilization in Indo-Pacific Area.

All provisional international programs would involve a healthy diversity of academic fields in response directly to the United Nations Social Development Goals (SDGs) so as to thoroughly prepare our students for resolving prevalent global issues.

Cultivating a More Engaged Campus through the Pioneering Mentor-Style Internship Program

Advising International Students

Offers over 1,800 courses in English and courses teaching 20 foreign languages: French, German, Spanish, Russian, Italian, Portuguese, Dutch, Turkish, Arabic, Polish, Czech, Ancient Greek, and Latin, as well as the seven East Asian languages of Japanese, Korean, Vietnamese, Thai, Malaysian, Tagalog, and Indonesian.

NTU works tirelessly with the Center for Bilingual Education to establish specific internationalization measures. The NTU Distinguished Teaching Award and the NTU Outstanding Teaching Award are granted to lecturers teaching in English to encourage our professors to open more courses with full English instruction. This policy helps satisfy foreign students' desires for more course diversity, while also improving local students' English proficiency and boosting their participation in international academic and professional exchanges. Furthermore, since the second semester of the 2020 academic year, the university has invited 40 faculty members to join the 2nd Mentor Project to ease international students into their lives at NTU. Thus far, 100 international students have benefited, and this number is expected to surge significantly in the near future. To provide Muslim students, teachers, and administrators with appropriate and convenient space for prayer, in 2021 NTU installed two prayer rooms in the Boya Lecture Building and one at the main library. Such efforts are a step towards promoting a congenial campus for all creeds and cultures.

Offer over 1,800 all-English courses and courses in 20 different languages

NTU International Mentorship Program

In 2022, NTU launched this pioneering mentorshipstyle internship program tailor-made for our international students. The program invited members of around 70 government agencies, foreign organizations, corporations, start-ups, business chambers, research institutions, and non-profit organizations to serve as mentors for international students. We hope to provide an opportunity for the students to put their theoretical learnings into practice and inspire the students with new perspectives on life and career under the mentors' guidance. We also hope to enhance international students' competitiveness for the job market and internships here in Taiwan.

In the first year of its rollout, the program welcomed 58 students from 22 countries entering internships from among 40 entities. NTU organized a number of career training workshops, in which heads or representatives of the internship institutions shared their learning and career insights. Company visits and cultural activities further provided international students with advanced preparation prior to entering the workforce.

Successfully matched 58 students from 22 countries with internships at 40 different institutions



NTU International Mentorship Program press conference- international dialogue and cooperation

NTU Continues International Exchanges, Cooperation, and Courses During the Pandemic

Standing Up for Vital Global Issues

To promote cooperation in sustainability-related fields, NTU provides subsidies to teachers and students to participate in international organizations and conferences, such as Global Health, Multi-hazards, and Sustainable Cities and Landscape. Currently, NTU is collaborating with various teams to tackle urban problems defined by the UN in its Sustainable Development Goals (SDGs). Faced with COVID-19 restrictions, partner universities are developing new collaborative models with NTU to maintain international academic exchanges.

Maintaining International Cultural Exchanges During the Pandemic

Collaborating with sister universities, NTU Plus Academy offers specialized courses and international short-term programs that integrate multidisciplinary academic subjects with Taiwanese cultural experiences, enabling students from around the world to acquire knowledge outside their primary program of study. Since 2020, in response to the COVID-19 pandemic, NTU has planned a variety of online courses. International students may remotely engage in synchronous or asynchronous learning, so their studies are unaffected by time differences or physical distances. NTU also recruits and trains students to serve as counselors for short-term international courses in order to promote interactions with and among international students facing travel restrictions.



Visiting students from the John Hopkins University (USA)

Flow & Freeze: Our Days at NTU

ursuit of

Exceptionalism

"Collection" may be too formal a word, but day by day, the NTU History Gallery has quietly gathered many images which most people thought would last indefinitely, but are literally fading and disappearing with the advancement of time.

What these pictures capture may not be as grand as Henri Cartier-Bresson's "defining moment," nor as magnificent as the photos created through the lens of Ansel Easton Adams. However, the priceless years of our youth may be fortuitously preserved.

In those days filled with high hopes and zest, your mind might have turned towards the future, but during your years at NTU, how many "imprints of youth" did you preserve?

Let images of past NTU share their individual dreams and stories.

As NTU marches towards its 100th anniversary in 2028, the NTU History Gallery launched a special exhibition of NTU campus life photos in November 2021 under the title "Flow & Freeze: The Hidden Time and Tide of National Taiwan University." As the gallery shared precious images taken on campus, it also took the opportunity to solicit even more bygone NTU photos and stories from alumni and their families.

As expected, many photos were sent to the gallery, and below is a beautiful story which took place during the process.

Some old photos the gallery possesses were transferred from brochures and booklets published by NTU-related institutions or memoirs of NTUers. Photo 1 below is the earliest NTU photo currently owned by the gallery, and it was kindly donated by Lin Kuan-hong, who told us that his father, Lin Kai-huan, an alumnus, was the young man seated in the center of the front row. The photo was taken in 1924, when Lin Kai-huan was studying at the Government-General of Taiwan Advanced Academy of Agronomy and Forestry. Lin later enrolled at Taihoku Imperial University (TIU) in March 1929 and became a student of the second class of TIU. The current location of the NTU Main Campus is where the Advanced Academy of Agronomy and Forestry once was. The institution was later renamed Taihoku Advanced Academy of Agronomy and Forestry. After the establishment of TIU, it was merged into the TIU system as the Specialized Faculty of Agronomy and Forestry. After its relocation to Taichung, the specialized faculty became an independent entity in 1943, and was renamed Taichung Advanced Academy of Agronomy and Forestry. It is the predecessor of the current National Chung Hsing University.

念記别送生先藤加

40

41

Photo 1





Photo 2

Photo 3

As for the post-WWII era, two of the earliest photos received by the gallery were taken by Prof. Li Siao-jong from the Department of Botany around July 1947. Photo 2 shows the old view of the Wenzhou Street dormitory area. The beautiful pastoral scenery right after the end of WWII was very different from present scene, in which tall apartment buildings occupy the entire block. The other photo, Photo 3, was taken when Prof. Li's younger brother and some classmates of his came to Taipei from Shanghai to visit Prof. Li during summer break. The two brothers, in their youth, climbed onto the abandoned WWII Japanese military aircraft Falcon (code name Oscar), which was situated on the lawn behind the Faculty of Liberal Arts at that time. After summer break, Prof. Li's younger brother returned to China to continue his studies, and died in the Cultural Revolution led by the Chinese Communist Party. This photo is very precious to Prof. Li, who has always treasured it for holding one of his dearest memories.

During the time of the special exhibition (near the end of 2021), it was also coincidentally the 150th anniversary of Canadian missionary George Leslie Mackay's journey in Taiwan (Mackay arrived in Taiwan in 1872). Rev. Mackay's grandson and great-grandson both studied at the university during different eras. His grandson, Seth Mackay Ko, was in the first class of students to graduate from TIU's Faculty of Literature and Politics. After WWII, Seth Mackay Ko's second son, Dr. William Leslie Ko, was admitted to the NTU Preparatory School in Science near the end of 1945, and was part of the inaugural class. He also later graduated from the Department of Mechanical Engineering in 1950. As if by fate, when the gallery was organizing another special exhibition, "150th Anniversary of Mackay's Journey in Taiwan: Love Beyond Space and Time," which launched in March 2022, the team came across a group photo of the NTU Preparatory School (Photo 4), in which faculty members and students were seeing off Kato Heizaemon before he returned to Japan. Among all the photos provided by Dr. William Leslie Ko, who was 95 years old at the time, the team was lucky to have found this particular photo. After some estimation, the team realized that the photo would have been taken around 1946, making it one year older than Photos 2 & 3. It is now the gallery's oldest NTU photo donated by an individual.

These beautiful stories are preserved through these photographs. After all, a special exhibition is just a brief occasion, and it certainly did not require alumni to rummage through boxes at home just to look for old NTU photos. Somehow, nonetheless, the shared memory of all NTUers worked its miracle as if an "invisible line" connects the old photos to dear memories of NTU and draws them back to our home-like campus.

Besides the above-mentioned photos featuring some of NTU's prominent early students, there are also two particularly eye-catching themes in the exhibition: 1) A Day at NTU, with the First Class as a Fresh Start, and 2) A Year at NTU, Beginning with Tracking Lost Bikes. Under these two themes, the gallery organized campus photos from different generations to reconstruct a typical day and year of an NTU student. In the first theme, the first class of a day refers to the class sessions starting at 8 am (astute alumni might wonder if 8 am reflects the actual start of an NTU day, since in the past, PE classes could start as early as 7 am). From the photos, we can see that a day at NTU is mostly a combination of commuting, classes, experiments, internships,

Photo 4

food, club activities, tutoring or part-time jobs, romance, and independent study sessions. A year at NTU, meanwhile, is usually defined by the span of an academic year. After a long summer break, many NTU students would have no idea where on campus they parked their beloved bike, so the year usually started with trying to locate the misplaced bike, thus the theme title "Tracking Lost Bikes." Regular events then followed, including orientation, registration, midterms, finals, the university anniversary, sports day, the Azalea Festival, NTUArtFest, the commencement ceremony, checking final grades, graduation trips, and summer camps. For alumni born in the 1950s to 70s, the gallery also included photos from Cheng-Kung Hill, as male students needed to go there for military service before entering university (this was suspended in February 1999). There are also some old photos taken during their service. For many alumni, it was a torturous 22 months, because such a lengthy period tended to terminate existing romantic relationships.

The photos under these two themes are as follows:

Photo 6

Photo 5

Photo 7 Photograph by Liu Guo-liang, provided by Office of the Secretariat

Photo 8 An old photo of NTU Photo Club, from the NTU History Gallery

Photo 5 was taken by Professor Emeritus Ling Der-lin from the Department of Horticulture ca. 1961. The students are seen holding books and studiously walking to class in the morning sun. In Photo 6, we can see a large clock just behind the security post at the Main Gate so that all NTUers could sync their watches with the university. On the clock was an inscription which read "Time is Life" (ca. 1961, retrieved from the 1963 graduation yearbook). The clock remained at the same location until 1985. Compared to how everyone checks the time on their phone or the internet today, it is certainly hard to imagine how life was back in those days and how technology has progressed.

Not being able to find one's bike after a long vacation is something many NTU students have experienced. In Photo 7, we can see a student helplessly looking for his bike. As bystanders, we can only wish him the best of luck among the sea of bikes. In Photo 8 (taken around 1980), we are reminded to be sympathetic for the owners of lost bikes when we see the "Shuiyuan Snatchers" (staff members responsible for the towing of misplaced bikes) loading bikes onto that fateful truck. If the students beg the Shuiyuan Snatchers for mercy, and promise never to mis-park again, do you think the Snatchers would show mercy?

Due to the Covid-19 pandemic, people rarely visited this fascinating special exhibition in person. The thoughtful gallery took upon itself to take as many alumni around the globe back to the days of their youth on campus. Thus, an online exhibition was launched simultaneously. In this way, even after the end of the physical exhibition, the gallery can continue to portray the appearance of NTU across different eras on the Internet.

"Flow & Freeze: Our Days at NTU" welcomes visitors from all parts of the world and is open 24/7 online via:

Online Exhibition

Exhibition Web

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