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CONTENTS

TAIPEI SCHOOL OF ECONOMICS AND POLITICAL SCIENCE TO BE ESTABLISHED AT NTHU

On May 9 NTHU entered into an agreement to jointly establish the Taipei School of Economics and Political Science (TSE) together with the TSE Foundation, which was set up with a NT$3 billion (US$100 million) donation from entrepreneur Lin Chen-hai, the founder of the Pau Jar Group. The mission of the TSE will be to provide world-class education in economics, international politics, and public affairs, with Asia as the center of gravity, and will soon begin recruiting top-notch faculty from around the world.

At the signing ceremony, TSE Foundation chairman Huang Huang-hsiung said that the TSE will be located on the NTHU campus, and that this type of cooperation between the public and private sectors is a first in the history of higher education in Taiwan.

Also present at the ceremony was Minister of Education Pan Wen-chung, who said that the establishment of the TSE is undoubtedly a new milestone for higher education in Taiwan, adding that in recent years NTHU has set up a number of innovative admissions channels, including the Rising Star program, the Rising Sun program, and the Special Admissions Program. Pan also pointed out that the merger of National Hsinchu University of Education (NHCUE) with NTHU has resulted in the addition of the College of Education and the College of Arts, and that the establishment of the TSE will

At the signing ceremony, from left to right: Alumni Association president Cai Jinbu , NTHU president Hocheng Hong, TSE Foundation chairman Huang Huang-hsiung, Minister of Education Pan Wen-chung and Pau Jar Group vice chairman Lin Chia-hung.

provide further impetus to Tsinghua's emerging role as a leading university in both technology and the social sciences.

President Hocheng Hong said that the plan for establishing the TSE has already been approved by the Ministry of Education, and that it will soon begin recruiting master's and doctoral students for the 2021-22 school year, two thirds of whom will be international students, adding that all courses will be taught in English, and that the School's diplomas will be issued by NTHU.

Chairman Huang said that the TSE aims at attracting outstanding students and world-class faculty, for which purpose he is helping to set up an international advisory committee which will solicit expert opinions, and that plans are underway for arranging academic exchanges with such well-known institutions as the London School of Economics and Political Science and the Harvard Kennedy School.

President Hocheng Hong said that public-private cooperation in education on such a scale is unprecedented in the history of higher education in Taiwan, pointing out that Lin's NT$3 billion donation to the TSE Foundation is the largest ever made in the field of social science education in Taiwan. He said that the TSE combines the prestige of the public sector with the flexibility and resources of the private sector, making it the first of its kind in Taiwan, and extremely rare in Asia, such that its success will surely attract international attention.

Hocheng asserted that technology is a major factor in all of the most pressing challenges facing humanity, such as food security, environmental pollution, energy, war, and even epidemics, and that any viable solution must take account of technological, political, and economic factors, adding that this was one of the principle motivations for establishing the TSE at NTHU.

Hocheng said that the TSE will be the eleventh college at NTHU, and that its multi-disciplinary master's and doctoral programs will be modeled on those of the London School of Economics and Political Science. The TSE plans to admit at least ten master's students for the 2021-22 school year, and in the following school year at least 40 master's students and ten doctoral students, after which enrollment numbers will gradually increase year by year. During the initial phase, TSE classes will be held in the Innovation Incubation Building on the NTHU campus, until the program's own building is completed on campus. NTHU's Yuehan Hall on Jinhua Street in Taipei City will serve as the headquarters of the planning committee, and will eventually serve as an additional venue for the program's classes.

Lin's son, Pau Jar Group vice chairman Lin Chia-hung, said that his father has always given much importance to education, and thus decided to assist Huang, who initiated the TSE project. The elder Lin's donation of NT$3 billion will be used to establish a fund, the interest generated will provide about NT$100 million each year to be used as operating expenditure for the TSE.

THE 2020 OUTSTANDING ALUMNI AWARD

NTHU has recently announced the two recipients of the Outstanding Alumni Award for 2020: Huang Tiao-kuei, a 1973 graduate of the Institute of Applied Mathematical Sciences; and Wu Lin-maw a 1977 graduate of the Department of Materials Science and Engineering.

Huang Tiao-kuei

A leading figure in the insurance industry who has made significant contributions to society and his alma mater.

Soon after completing his master's degree at NTHU, Huang Tiao-kuei began working at Cathay Life, successively serving in the actuarial, business, and investment departments; he is currently the chairman of the board and in recognition of his many contributions to the industry he was awarded the Insurance Excellent Performance Award from the Taiwan Insurance Institute. As of 2019, Cathay Life was the largest insurance company in Taiwan, such that one out of every three people is a customer. Huang has also played an indispensable role in Cathay Life's commendable efforts in promoting green operations and corporate social responsibility.

The recipients of the Outstanding Alumni Award for 2020: Huang Tiao-kuei (left) and Wu Lin-maw.

Chairman Huang is a past recipient of the College of Science's Outstanding Alumni Award and is currently a member of NTHU's Club One Hundred. Ever since graduation, he has been actively involved with his alma mater and is a regular attendee of school events, taking every opportunity to share his experience with teachers, alumni, and students. He has even set up a scholarship for helping disadvantaged students to successfully complete their studies.

Huang began his career in an entry-level position and gradually accumulated a wealth of experience while finding ways to deal with various difficulties. He's found that in dealing with a particular issue, it's essential to formulate a strategy that fits the time, place, and people involved; he's also found that slavishly imitating something which worked well for others often brings

poor results. Huang also encourages young people to learn from their failures, to take risks, and to be willing to go overseas to such places as mainland China, Vietnam, Indonesia, the Philippines, and elsewhere in Southeast Asia.

Wu Lin-maw

Forging ahead in the steel industry while making major contributions to society and his alma mater

Wu Lin-maw earned his bachelor's degree from the Department of Materials Science and Engineering in 1977, and worked as an engineer, section chief, and director of metallurgy and quality control at Sinosteel from 1979 to 1990. In 1990 Wu began working for the Yieh Phui Enterprise steel company, where he served as the assistant manager of the Technology Department, the assistant general manager, the vice president of Marketing and Sales, and the deputy general manager of technology; in 2002 he was promoted to become the president of his campany.

In 1991 Wu completed a manual on steel plating technology which was quickly incorporated into the training programs of numerous steel companies. In 1998, in cooperation with Hon Hai Precision Industry, he helped to developed a method for producing hot-dip galvanized steel sheeting for computer cases, which has since replaced the electroplated galvanized steel. In 2011 the Ministry of Economic Affairs conferred on Yieh Phui Enterprise the International Trade Award and the Top 100 Taiwanese Brands Award.

Under the leadership of Wu, Yieh Phui Enterprise has won many other awards for innovation and development. The company's total revenue in 2018 was NT$73.856 billion. In 2000 Commonwealth magazine ranked Yieh Phui Enterprise as the third largest metal manufacturer in Taiwan, and the 677th largest enterprise in Greater China. In 2019 the company received the Excellence in Workplace Safety Award from the Ministry of Health and Welfare.

Wu has been a member of the Tsinghua Entrepreneur Network since 2013, and in 2016 he served as its president. In 2018 he was elected the executive director of the Alumni Association, in which capacity he established the Southern Alumni Association and served as its vice president; in 2020 he became its president. In addition to actively promoting cooperation between the Department of Materials Science and Engineering and the E United Group, Wu has participated in numerous activities at NTHU and has made considerable contributions to its development.

Reminiscing about his time as a student at NTHU, Wu said, "I grew up in the countryside, and was admitted to the Department of Physics. When I first arrived I fell in love with playing billiards, as a result of which I neglected my schoolwork; I rationalized it by calling my new hobby an "ongoing experiment in vector science." I managed to eventually catch up with my schoolwork, but ultimately decided to transfer to the Department of Materials Science and Engineering—a decision which changed the course of my life." Wu's advice to students is to make a major effort to acquire good skills in English and computers.

USING BIG DATA TO COUNTER CORONAVIRUS

Facebook has recently begun to collaborate with NTHU and Harvard University in using big data to counter the spread of coronavirus in Taiwan. This international study is being led by Assistant Professor Holly Chang of the Institute of Bioinformatics and Structural Biology at NTHU. The preliminary results indicate that the risk of local transmission is higher than long-distance transmission between counties and cities. Chang's advice for the upcoming holiday is to stay at home and to avoid crowds.

Based on the results of another study she has recently conducted using mathematical modeling to assess the effectiveness of wearing face masks, Chang strongly supports the Central Epidemic Command Center's (CECC) decision to set up a system for distributing masks, since it prevents the hoarding of an item essential for limiting the spread of the epidemic. She also suggests that giving priority to such high-risk groups as seniors over 70 years old and those with chronic diseases would make the policy even more effective.

Dr. Holly Chang of the Institute of Bioinformatics and structural Biology, NTHU.

Using Facebook's big data on the movement of people

At the end of January Facebook—with some 250 million active users, the world's largest social media platform—announced that it would begin providing big data for a joint study by NTHU and Harvard University's School of Public Health on the spread of coronavirus. The data includes estimates of the number of people moving between sectors 4.5 square kilometers in size.

Taipei City—Taiwan's coronavirus hotspot

Based on Facebook's data on people's movements, the research found that the five cities in Taiwan where the probability of contracting coronavirus is the highest are Taipei, New Taipei City, Kaohsiung City, Keelung City, and Hsinchu City,

respectively. The study also found that the five municipalities most at risk from infections brought in from other areas of Taiwan are Taipei City, Hsinchu City, Chiayi City, New Taipei City, and Hsinchu County, respectively.

Chang explained that the large number of people commuting to Greater Taipei and Greater Hsinchu on weekdays puts these areas at higher risk of outside infections. What's surprising is that Chiayi City—the 18th largest municipality in Taiwan, with a population of only 260,000—is ranked so high; Chang speculates that this might be due to the relatively small population of Chiayi City, which makes it more susceptible to outside influence.

High-risk crowding

Chang's research team also found that local movement has a stronger correlation with the transmission of the coronavirus than does long-distance movement. This runs counter to the widespread perception that distance traveled is the most important risk factor; what matters most is actually the number of people contacted and the length of time one is in close contact with them. Thus visiting crowded places near one's home may be even riskier than traveling to popular tourist attractions. In Chang's view, the best way to reduce the risk of infection is to simply stay at home as much as possible.

For Chang, one rather concerning finding of the study was that, despite the repeated warnings issued by the CECC since the outbreak of the epidemic, domestic travel in Taiwan has continued nearly unabated, pointing out that over the past two months, the number of trips between Taipei and Yilan, Taipei City and New Taipei City, and Changhua and Taipei has not decreased, not even on Valentine's Day or on the long weekend at the end of February. The team's findings have been provided to the CECC for use in formulating future policies and control measures.

The team has also used mathematical modeling to simulate the effect of wearing a mask on the infection rate. According to Chang, there is a clear correlation between the widespread and correct use of masks and lower infection rates. Thus millions of masks are being produced and distributed daily in Taiwan, and this is one of the reasons the nation has been able to ride out the pandemic relatively unscathed.

Priority distribution of masks

A study by Chang and Colin Worby, a computational biologist at the Broad Institute jointly established by the Massachusetts Institute of Technology (MIT) and Harvard University, shows that the proper use of masks by the majority of people reduces both the infection rate and the mortality rate of covid-19.

They also found that when masks are in short supply, giving priority to such high-risk groups as seniors over 70 years old and those with chronic diseases helps to reduce the overall infection rate. Chang said that at the beginning of the epidemic the CECC commandeered the mask factories in Taiwan and set up a mask distribution system to prevent panic buying and hoarding—two key measures which have helped the nation stay ahead of the curve.

EXPANDING CAREER PATHS WITH A SPECIALIZATION IN MEDICAL TECHNOLOGY

In the ongoing effort to give increasing emphasis to education and research in the field of medical science, NTHU is preparing to launch three new programs—a post-baccalaureate in medicine, and doctoral programs in precision medicine and the biomedical applications of artificial intelligence (AI)—and is joining forces with Taoyuan City to establish the Tsinghua University Hospital. In addition, the University is planning to offer program combining medical science and technology which will be open to all undergraduates.

After passing the university entrance exam, many senior high school students are faced with an agonizing choice: bowing to their parents' expectations by majoring in science and engineering, or pursuing their own interest in the arts or humanities. To help deal with this conundrum, NTHU implemented provisions allowing undergraduates in all programs to officially add a second or even third specialization in 2006.

Vice president for academic affairs Chiao Chuan-chin said that nearly 20 percent of those who graduated from NTHU last year had a specialization in addition to their major, and there were nearly a hundred cross-disciplinary combinations, including management and law, anthropology and sports science, materials science and philosophy, and electrical engineering plus life sciences. Chiao added that the opportunities for unique combinations greatly increased when National Hsinchu University of Education was merged with NTHU, resulting in the addition of the College of Education and the College of Arts.

ⓐ The Department of Medical Science is using a virtual reality system to teach human anatomy.

ⓑ A student of the Department of Medical Science using virtual reality to study human anatomy.

c Amongst those planning the new specialization in medical science is Prof. Chen Lin-yi, director of the Department of Medical Science.

d Vice president for Academic Affairs Chiao Chuan-chin said that NTHU is giving increasing emphasis to education and research in medical science.

In response to the latest societal trends, last year NTHU launched a number of school-wide specializations in AI, including a 19-credit program for non-science and engineering students titled "AI Application Basics," and a 21-credit program for science and engineering students titled "AI Advanced Applications."

Chiao said that the new specialization in medical science and technology will provide students from all programs with more opportunities to diversify.

For example, prosthetic manufacturers require workers with a solid knowledge of mechanical engineering, pharmaceutical companies require researchers with expertise in the biological sciences, and the treatment of aphasia requires professional skills in speech therapy and psychological counseling.

Amongst those planning the new specialization in medical science is Prof. Chen Lin-yi of the Department of Medical Science, who said that the program is expected to include courses in human physiology and anatomy, virtual anatomy, medical genetics, medical statistics and epidemiology, microbiology and immunity, molecular diagnostics, internal medicine, medical law and research ethics, physiological measurement and music therapy, cancer biology, biomedical engineering, and human database analysis.

By way of example, Chen said that a student of the Department of Computer Science who graduates with a specialization in medical science would be well placed for jobs in fields which require expertise in both areas, such as precision medicine, the biomedical applications of AI, biomedical electronics, medical data analysis, physiological testing analysis, and medical materials software development.

Prof. Tseng Fan-gang, the director of the Office of Research and Development, said that although NTHU does not yet have a college of medicine, in the academic rankings of Taiwanese universities published by Times Higher Education it was ranked fifth in medical science, and first amongst universities without a college of medicine.

Tseng further indicated that NTHU has a very solid foundation in medical physics, medical materials, medical imaging, and precision medicine; and that more than 180 of the school's 800 faculty members are engaged in research related to medical technology. In addition, for the past 20 years NTHU has been cooperating with more than ten large medical centers at home and abroad.

COLLEGE OF ENGINEERING RECEIVES MAJOR DONATIONS FOR ATTRACTING NEW FACULTY

As part of its ongoing strategy to attract top international faculty, NTHU has initiated various measures to supplement the salaries of teachers and researchers. In addition, several NTHU colleges have initiated their own measures for the same purpose, amongst which is the College of Engineering's Shuren Fund, which beginning this year will provide a salary supplement of NT$20,000 per month for new faculty during their first two years at NTHU. On May 14 the College held a donation ceremony to acknowledge major contributions to the Shuren fund by C Sun Manufacturing, Gallant Precision Machining (GPM), and Gallant Micro Machining (GMM).

During the donation ceremony President Hocheng Hong said that C Sun, GPM, and GMM are unassuming stalwarts in the manufacturing of panels, chips, and semiconductors, respectively, and thanked them for making such generous donations despite the difficulties being caused by the Covid-19 pandemic.

Raising funds for bringing new blood to NTHU

In order to strengthen the recruitment and retention of top scholars from Taiwan and abroad, NTHU provides salary supplements, in accordance with the related guidelines established by the Ministry of Education (MOE). To date, 532 NTHU faculty members have received such supplements,

C Sun, GPM, and GMM have each provided a major donation for the College of Engineering's Shuren Fund.

amounting to 67% of the total number of teachers, one of the highest supplement rates in Taiwan; amongst newly appointed faculty, the rate is an impressive 70%. In addition, the MOE's Yushan Scholar program and Yushan Young Scholar program provide an average salary supplement of NT$100,000 per month.

However, according to Dean Lai Chih-huang College of Engineering, even with these various supplements, the salary of a new assistant professor is still less than the salary of an assistant professor in neighboring countries, and is also less than what's offered for many entry-level positions in domestic industry, making it difficult for Taiwanese universities to recruit new faculty. Moreover, assistant professors are most in need of salary supplements during their first two or three years, due to the relatively low starting salary and the difficulty of getting a major research grant from the Ministry of Science and Technology prior to setting up a research lab and a team of research assistants.

Pointing out the increasing difficulty of filling vacant faculty positions, Dean Lai said that of the College of Engineering's 130 full-time teachers, 60% will retire within the next seven years, making it essential for the College to step up its recruitment efforts. This was the primary motivation for setting up the Shuren Fund, which establishes a link between new faculty and industry, and serves to "light a lamp which will shine bright for decades to come."

At present, the monthly salary of an assistant professor at a national university in Taiwan starts at NT$60,000, and this can be supplemented with up to NT$40,000 from NHTU's school-wide program (including an NT$10,000 housing subsidy), plus NT$20,000 from the Shuren Fund, making it possible to provide a beginning monthly salary of NT$120,000.

ⓐ GMM chairman Liang Youwen (left) presenting a NT$1.5 million donation to the Shuren Fund.
ⓑ GPM president Jason Chen (left) presenting a NT$1.5 million donation to the Shuren Fund.

Industry answers the appeal for support

The Shuren Fund receives donations from both companies and individuals. The standard donation for a company is NT$1.5 million, which provides a monthly salary supplement of NT$20,000 for three new teachers for two years; the standard donation for an individual is NT500,000 which provides a monthly salary supplement of NT$20,000 for one new teacher for two years. The fundraising target for this year is NT$10 million, two thirds of which has already been received.

C Sun, GPM, and GMM have each donated NT$1.5 million, enabling the College of Engineering to provide the standard monthly salary supplement of NT$20,000 for nine new teachers for two years, each of whom will have a related title, such as the "C Sun Young Scholar." The College has recently decided to provide the supplement to four incoming assistant professors: two in the Department of Power Mechanical Engineering, and two in the Department of Materials Science and Engineering.

Prof. Chen Yu-bin of the Department of Power Mechanical Engineering was instrumental in arranging the donations from C Sun, GPM, and GMM, which form a business alliance. C Sun mainly produces industrial ovens used in the manufacture of panels and semiconductors, and has benefitted from Chen's knowledge of thermal radiation furnaces in the areas of research and development and employee training. Thus when Chen was canvassing for sponsors for the Shuren Fund, C Sun immediately signed up. Chen said that in designing custom-made ovens for heating glass panels and other materials, C Sun previously relied on its master craftsmen to design ovens providing uniform heating without using lots of energy, but later began providing training to enable its engineers to quickly determine the infrared spectrum most suitable for a given material, greatly improving the efficiency of the design. Chen said that when he completed his doctoral degree at the Georgia Institute of Technology in 2007 he decided to return to Taiwan to teach, even though at that there was little in the way of funding, prestige, resources, and doctoral students.

Representatives of NTHU and C Sun, GPM, and GMM at the donation ceremony.

Long-term support

Also attending the donation ceremony were College of Engineering associate dean Lin Chao-an, College of Engineering associate dean Chen Hsin-lung, C Sun chairman Morrison Liang, GPM president Jason Chen, and GMM chairman Liang Youwen.

NTHU president Hocheng Hong thanks Morrison Liang for C Sun's donation.

C Sun chairman Morrison Liang said that C Sun was established on September 28 (Teacher's Day), 1966, next to a Confucian Temple, indicating the company's high regard for the teaching profession. Thus C Sun was pleased to become a patron of the Shuren Fund, and is planning to continue providing support long into the future. Moreover, in his capacity as vice chairman of the Taiwan Printed Circuit Association and the Taiwan Electronic Equipment Industry Association, Liang has convinced several hundred of his colleagues to also support the Shuren Fund.

GPM president Jason Chen said that when he heard about the Shuren Fund it took him less than ten seconds to decide to sign up, adding that last year GPM joined Tsinghua's international industry-university alliance, which has helped the company to find a number of specialists in artificial intelligence.

GMM chairman Liang Youwen said that when he learned that many outstanding professors of the baby boom generation are about to retire, and that the starting salary for assistant professors in Taiwan doesn't compare to that of neighboring Japan, South Korea, Hong Kong, and Singapore, he realized that Taiwanese enterprises need to do their part to remedy the situation.

Liang Youwen, who is also the assistant chairman at C Sun, said that the cooperation between C Sun and the Department of Power Mechanical Engineering goes back quite a few years, and includes such areas as thermal conductivity, plane grinding, and visual algorithms, with the result that all of its key components are now made in Taiwan. As an example, he mentioned that two years ago C Sun received an order from an international mobile phone manufacturer to design an oven with a constant temperature of 450° C, which was successfully completed under the guidance of Prof. Lee Ming-tsang of the Department of Power Mechanical Engineering. He expects that in three to five years new teachers will become the backbone of industry-university cooperation.

Liang Youwen added that the combined donation of NT$1.5 million is just a start, and that he hopes to see lots of other enterprises follow suit in the near future.

A NEW WINDOW OF OPPORTUNITY OPENS FOR CTM STUDENTS

ⓐ ASMedia general manager Lin Zhewei (left) and CTM dean Lin Che-chun (right) holding the donation agreement.
ⓑ ASMedia general manager Lin Zhewei (left) and CTM dean Lin Che-chun (right) holding the oversize donation

As part of its ongoing efforts to expand the international perspectives of its students, the College of Technology Management (CTM) has recently implemented the Overseas Learning Program to provide subsidies for students traveling abroad to engage in exchange programs, internships, international competitions, seminars, and volunteer programs. It is expected that the new program will double the number of CTM students traveling abroad to participate in such exchanges, the current rate of which is about 25 percent. The Program is being sponsored by ASMedia Technology, which has generously donated NT$5 million.

At the donation ceremony ASMedia general manager Lin Zhewei presented an oversize check to CTM dean Lin Che-chun.

Dean Lin said that good managers are born of experience, and require lots of emotional intelligence, sensitivity to context, and cultural refinement; thus the CTM teaches its students not only how to do things, but also interpersonal skills. Overseas experience is one of the best ways to learn and hone these kinds of skills. Lin once heard Taiwan Semiconductor Manufacturing Company (TSMC) chairman Morris Chang said that the main reason Taiwan lacks a first-class management school is its lack of world-class enterprises, and that top managers need to have an international outlook. These remarks convinced Lin of the importance of overseas experience.

The CTM currently consists of three departments, viz., Economics, Quantitative Finance, and an undergraduate interdisciplinary program; and five graduate institutes, viz., Service Science, Technology Management, Law for Science and Technology, Economics, and Quantitative Finance; plus five programs for professionals. All of the programs for professionals have an overseas component built into the curriculum, so practically all of their students spend some time overseas; as for the other departments and graduate institutes, the rate is between 10 and 30 percent.

At the donation ceremony: ASMedia general manager Lin Zhewei (left), NTHU president Hocheng Hong (center), and CTM dean Lin Che-chun (right).

However, CTM students do understand the importance of overseas experience. Last year, 81 CTM students applied for international exchange grants offered by NTHU—the largest number of applicants of any college—but due to limited resources, only about half of them received some support. Eager to give more students a chance to go abroad, the CTM began to solicit enterprises to help subsidize the cost of traveling abroad.

Dean Lin said that ASMedia's generous donation will allow many more CTM students to gain valuable overseas experience, which will come in handy later on, especially when working in an international setting.

When General Manager Lin learned about the Overseas Learning Program he immediately decided to support it, both as a way of affirming and encouraging academic excellence at NTHU, as well as a way of fulfilling ASMedia's social responsibilities.

General Manager Lin earned a master's degree in electrical engineering from the University of Missouri, where he learned that studying abroad brings not just professional skills, but also invaluable cross-cultural understanding and communication skills which have proven to be invaluable assets in managing an international business and interacting with foreigners.

General Manager Lin encouraged CTM students to apply for a grant and to take every opportunity to go abroad and "learn more than you'll ever learn from books."

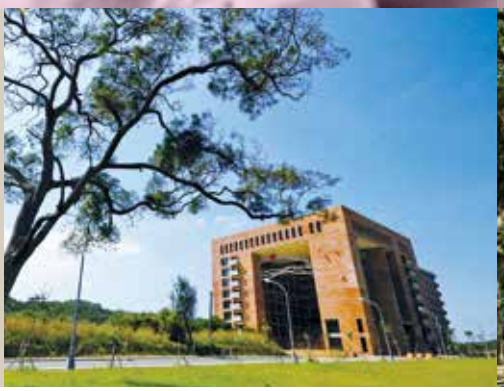
Also attending the donation ceremony was President Hocheng Hong, who thanked ASMedia on behalf of the university and said that how some countries have dealt with the ongoing coronavirus pandemic more effectively than others demonstrates the importance of having an international outlook, adding that providing students with plenty of opportunities for overseas exchanges is something a first-rate university has to make a priority, as is being done by the CTM.

c NTHU president Hocheng Hong emphasizing the importance of international experience.
d CTM dean Lin Che-chun (left) presenting ASMedia general manager Lin Zhewei (right) with a memento.
e ASMedia general manager Lin Zhewei sharing his own experience of studying abroad.

Department of Economics senior Luo Wenjun spent one semester last year as an exchange student at the Czech Technical University in Prague, and she was impressed by the campus culture where students are encouraged to ask questions, think independently, and actively engage in discussion with peers and teachers, both during and after class; Luo is now thinking about going abroad to study for a master's degree.

Luo also strongly encourages other students to take every opportunity to go abroad. In her case, her parents had to bear a considerable financial burden, but "the new travel grant program will make such opportunities accessible to lots more students," said Luo.

Institute of Technology Management student Huang Xiangyun spent summer vacation last year as an intern at an eco-friendly packaging company in Vietnam. She laughingly said that she used to be a "control freak," but during her internship she learned a lot about the value of flexibility and accommodation from the way her Vietnamese colleagues were able to effectively deal with a series of exigencies, including water cuts, power cuts, and a tense labor strike.



SPECIAL PROGRAM SET UP FOR TAIWANESE STUDENTS WITH OVERSEAS STUDY PLANS ON HOLD

In light of the worldwide disruptions brought about by the coronavirus pandemic, the Ministry of Education has recently announced a special program allowing Taiwanese students studying overseas to transfer to universities in Taiwan, including NTHU. As for Taiwanese students who were planning to begin studying overseas in the fall, many have had to postpone their plans. With this latter group in mind, NTHU has set up the Weigong Academy, allowing such students to study at NTHU until they are able to go aboard.

NTHU has set up the Weigong Academy for Taiwanese students forced by the coronavirus pandemic to postpone their overseas study plans.

Vice president for academic affairs Chiao Chuan-chin said that schools in 185 countries have been forced to suspend classes because of the pandemic, and many may not be able to reopen in September. Thus the Weigong Academy will be accepting undergraduate and graduate students for the 2020 academic year, and is also open to Taiwanese students returning from overseas.

Chiao said that students in the program will be allowed to attend whichever NTHU courses are of interest to them (including lab courses, practicums, and physical education classes), and will receive a certificate detailing their studies.

Expert mentoring

The Weigong Academy will also provide participating students with customized counseling, individually or in groups, focusing on coursework and career planning. Participants can apply for on-campus accommodation, and will be allowed to participate in student clubs and other activities, and the Weigong Academy will have a dedicated space for conducting its activities.

The Weigong Academy will be led by Prof. Huang Yi-long of the Institute of History. Amongst the program's impressive array of mentors are Chiang Ann-shyn, dean of the College of Life Science and director of the Brain Research Center; Li

The Weigong Academy will be led by Prof. Huang Yi-long (second from right) of the Institute of History.

Chia-wei of the Department of Life Sciences; Tsai Nun Sian, director of the Research Center for Archeology and Antiquities Authentication; Peng Shin-yi of the Institute of Law for Science and Technology; Fu Li-yu, recipient of Best Animation Prize in the Golden Bell Awards; and Charles Hsu, founder and chairman of eMemory Technology.

A time to prepare, a time to network

Huang said that the Weigong Academy is intended to meet the exigencies of an unprecedented situation, and that all of the program's mentors are volunteering their time so that participating students can make the most of the delay in commencing their overseas education.

Noting that the first semester of overseas study is often the most challenging, Huang said that the Weigong Academy will provide students with an opportunity for some extra preparation, especially in language skills and difficult subjects.

Huang added that the program will also provide participants with an excellent opportunity to network with like-minded people prior to commencing their overseas education.

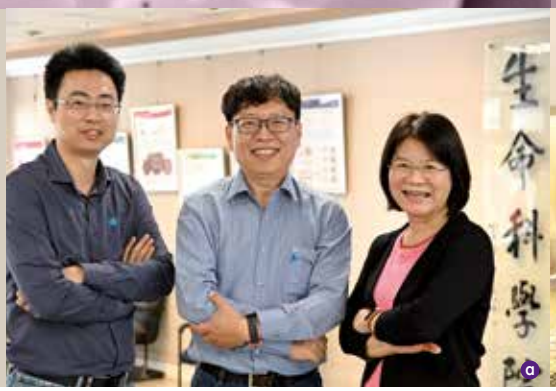
Helping students prepare for study overseas

Amongst the students who have expressed a strong interest in applying to the Weigong Academy is Jiang Yuen, a senior high school student in the Bilingual Department of the National Experimental High School (NEHS) at the Hsinchu Science Park. He has been admitted to the Missouri School of Journalism in the United States, but the pandemic has thrown his actual matriculation date into question. Jiang is planning to become an investigative reporter, and is planning to do some advance preparation at NTHU by taking classes in such areas as journalism, writing, video narrative, big data, and information technology.

Students of the Weigong Academy will be allowed to attend whichever NTHU courses are of interest to them.

Jiang has been strongly encouraged to apply by his father, Jiang Sen, who said that he was highly impressed with the wide range of general education courses at NTHU, and is confident that gaining some university experience prior to going abroad will benefit his son immensely.

As for cost, the Office of Academic Affairs has indicated that Weigong Academy students will be required to pay the regular tuition and fees, but will be eligible for a partial refund if a change in the pandemic allows them to go overseas prior to completing the semester; low-income students will be exempt from tuition and fees.



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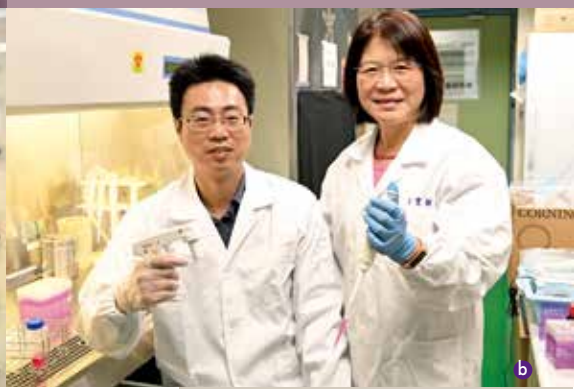
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RECORD NUMBERS APPLY TO THE DEPARTMENT OF LIFE SCIENCES

The Department of Life Sciences recently held the written examination and interviews for the second stage of individual admission applications for the 2020 academic year, with the number of applicants reaching an all-time high of 185—a fivefold increase, likely brought about by the coronavirus pandemic. In recent years the College of Life Sciences has been giving increasing emphasis to teaching and research in basic and clinical medicine, and has applied to the Ministry of Education to formally change its name to the College of Life Sciences and Medicine.

A record number of applicants

Department of Life Sciences director Yin Hsien-sheng said that the Department is planning to admit 47 new students for the upcoming school year, 29 of whom will be admitted on the basis of individual applications. This year the admission standards were raised for English, math, and natural sciences, setting them on par with those of Yangming University. Nonetheless, lots of applicants got full scores, and 71 of the initial 185 applicants made it to the second round. In addition to group interviews and impromptu tests, this year a written test was added to the application process.

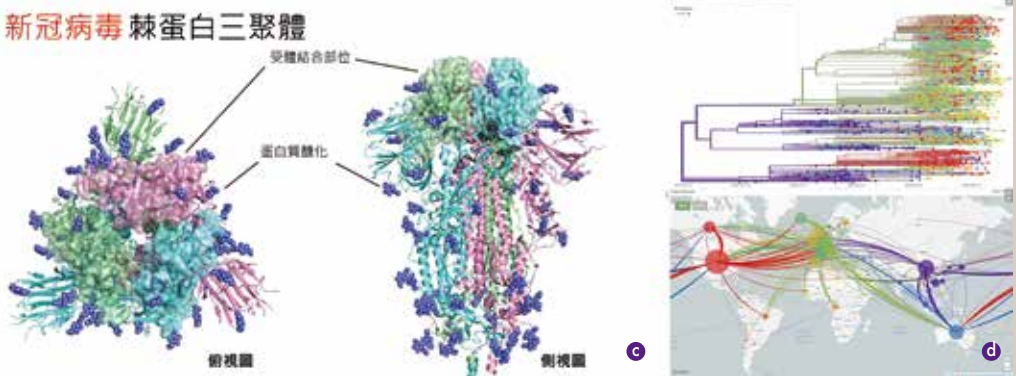
Application test questions

The written exam consisted of two questions, one of which was "Why is the novel coronavirus so infectious?" which was jointly written by Prof. Wang Wen-ching of the Department of Life Sciences and Associate Prof. Sue Shih-che of the Institute of Bioinformatics and Structural Biology, and was based on a research report they recently published in *Scientific American*.

According to Wang, the novel coronavirus is 100 times more infectious than the SARS virus, and its affinity for human cells is 20 times that of the SARS virus. Its high infectivity is mainly due to the spike protein on its surface, which acts as a kind of skeleton key for entering the human body. Once it gets it, it attaches to the ACE-2 receptor cell membrane, and due to its particular alkaline peptide sequence, it is easily cleaved by proteases on the cell surface, exposing the fusion peptide and fusing with the cell membrane, allowing it to enter the cell, where it reproduces prolifically.

Prof. Sue said that in this test question the applicant was also provided with the genetic sequences of the coronavirus, bats, pangolins, and humans, and asked to identify the optimal characteristics of a coronavirus intermediate host and which testing methods are most feasible.

The second test question was "Why does hair turn white?" and was based on a paper published in the January edition of *Nature* by Hsu Ya-chieh, a graduate of the Department of Life Sciences



ⓐ From left to right: Associate Prof. Sue Shih-che of the Institute of Bioinformatics and Structural Biology, Department of Life Sciences director Yin Hsien-sheng, and Prof. Wang Wen-ching of the Department of Life Sciences.
ⓑ Wang (right) and Sue have recently published a paper in Scientific American on coronavirus transmission.
ⓒ Spike proteins on the surface of coronavirus.
ⓓ The transmission routes of novel coronavirus.

and now an associate Prof. at the Department of Stem Cell and Regenerative Biology at Harvard University. In this study it was found that stress affects the sympathetic nerves, leading to accelerated differentiation of stem cells, such that the melanin stem cells in the hair follicles have no time to replenish, causing hair to whiten.

New avenues for admission

This year the Department of Life Sciences will begin admitting students via a Special Admissions Program, which was set up for applicants with exceptional talent, but not necessarily with good grades. Amongst the 17 applicants to the Department via the Special Admissions Program, three were admitted. Yin said that during the interview the applicant is asked questions based on the materials submitted by the applicant, and sometimes the applicant is asked to read a research paper and to answer questions on it.

Several faculty members of the College of Life Sciences have joined a research team at Academia Sinica working on epidemic prevention and developing a coronavirus vaccine. Yin said that the College emphasizes cross-disciplinary research, such as the development of a speedy test for coronavirus, and that this requires integrating expertise in biology, medicine, and engineering. Thus the College encourages its students to add a second-specialization in such areas as electrical engineering or computer science.

Names matter

College of Life Sciences dean Chiang Ann-shyn said that the College currently has two undergraduate departments, five graduate institutes, and one undergraduate interdisciplinary program, and is preparing to add a post-baccalaureate program in medicine. Moreover, the University has already agreed to change the College's name to the College of Life Sciences and Medicine, and the change is currently being processed by the Ministry of Education.

Chiang said that the College's future emphasis will be on the integration of basic biomedicine, clinical medicine, and cross-domain innovative biotechnology, including the development of precision medicine, such as high-throughput pathogen screening, ultra-analysis biomedical imaging, AI diagnosis, and new vaccines.

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Ms. Hui-Chen Chan, Division of International Students, Office of Global Affairs.
Email: hcchan@mx.nthu.edu.tw
Tel: +886-3-5162461
Fax: +886-3-516-2467
Office hour: 8:30AM -5:00PM, Monday through Friday (Taiwan time)

Application Timeline:
Degree Student
Fall Semester Application Graduate Program: January 1~March 15
Undergraduate Program: November 15~February 15
Spring Semester Application: August 15 to October 16

Exchange Student
Fall Semester Application: February 1~ April 15
Spring Semester Application: September 1~November 1

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TEL：03-5715131 · E-mail：web@cc.nthu.edu.tw · http://www.nthu.edu.tw/
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