Taipei Tech Post

National Taipei University of Technology

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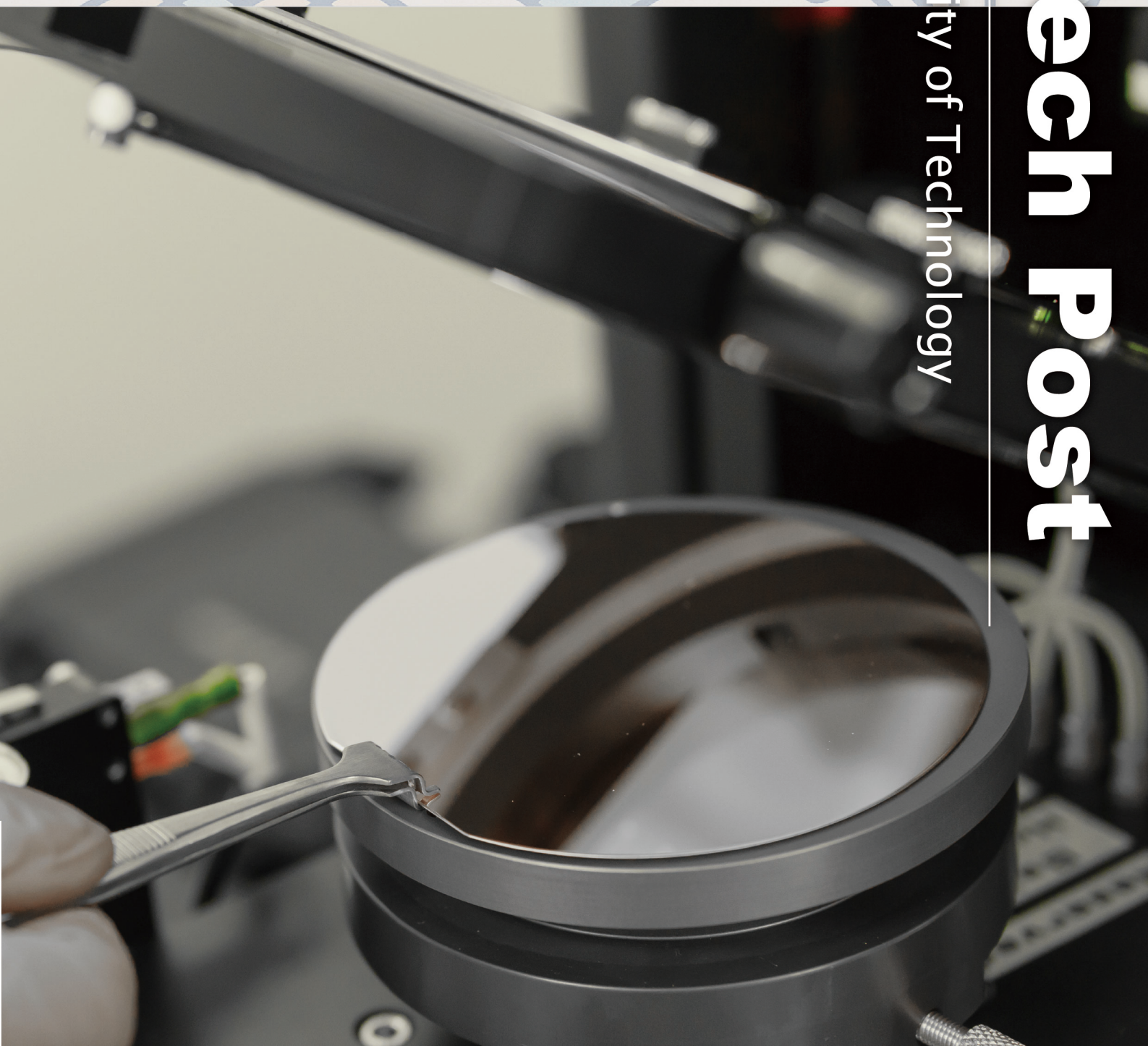
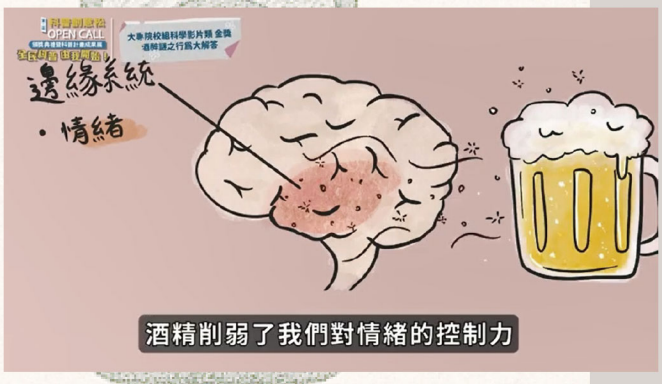


Taipei Tech's Scientific Video on Blackouts After Drinking Wins Gold Open Call Award



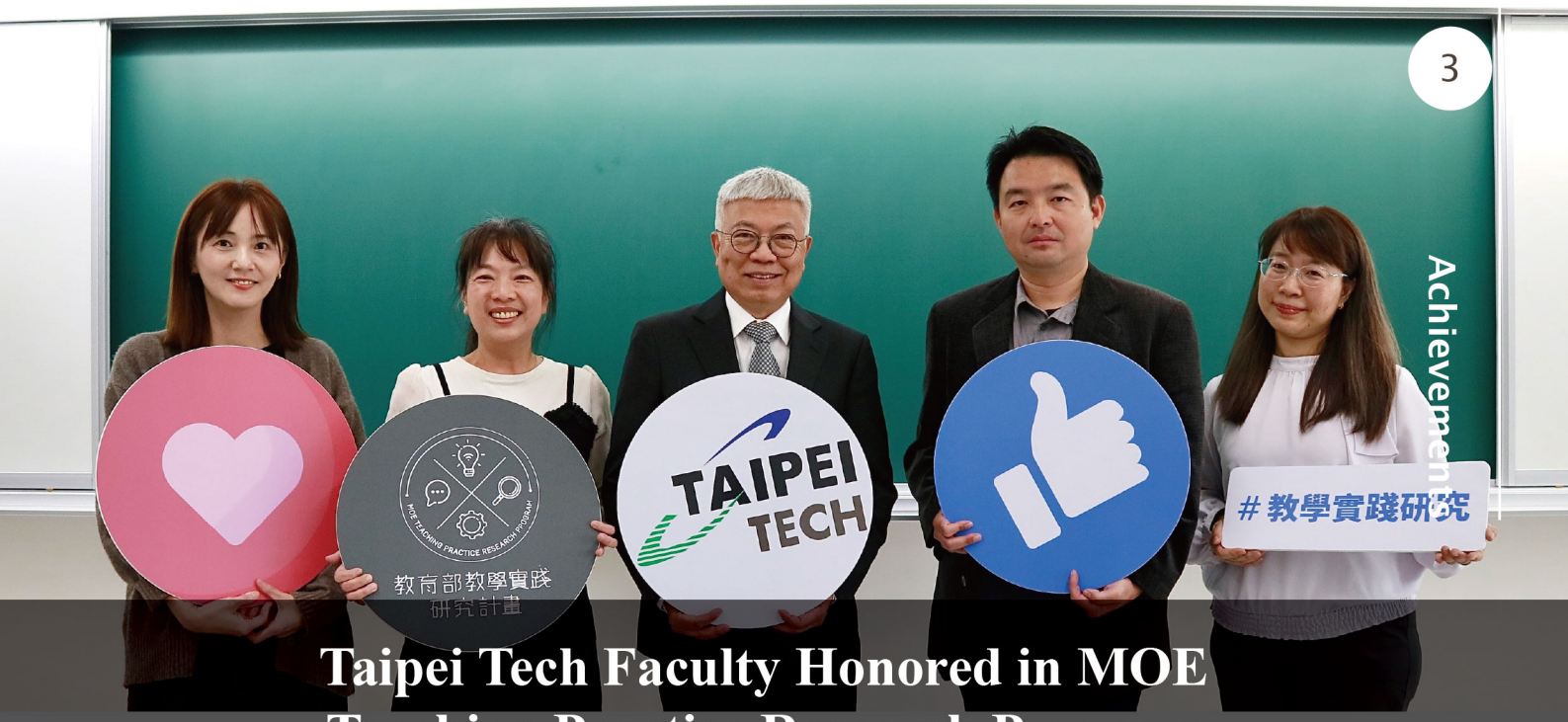
Why do some people lose their memory or behave irrationally after drinking alcohol? A team from Taipei Tech's Department of Interaction Design tackled this question and triumphed at the National Science and Technology Council's second "Open Call Award." Their short film, The Mysterious Behavior Behind Drunkenness, beat out 460 submissions nationwide to win the gold award in the university division for scientific videos.

The 12-minute film focuses on the drinking culture among young adults. It depicts four real-life scenarios after drinking: someone who keeps vomiting, someone who suddenly becomes a language master, someone who blacks out, and a pair whose emotional outbursts go unchecked. Each example examines alcohol's physical and psychological impact, blending scientific principles with dynamic storytelling to encourage responsible drinking.

The team, named Drunkenly Busy, consists of two master's students, Chen Yu-chen and Huang Yu-chiao, under the guidance of Professor Huang Yi-ting. Huang Yu-chiao, who was responsible for planning and post-production, observed that people often act strangely after drinking, and she thinks the scientific explanations behind these behaviors are worth exploring.

Chen Yu-chen, who created the stop motion animations, experimented with time-lapse drawing for the first time in this project. She explained, "In an era dominated by social media shorts, it's challenging to keep viewers engaged with longer films. We wanted to make it fun and engaging so people would watch, interact, and share." The hand-drawn animations not only made the visuals more appealing but also allowed for greater freedom in exaggerating drunken behaviors. The video is structured in sections, each featuring a real anecdote paired with a scientific explanation, making it easy for viewers to relate to each scenario.

Professor Huang Yi-ting noted that the students had only two weeks from deciding to enter the competition to submit their final video. To ensure scientific accuracy, they carefully researched reliable sources and focused on presenting the information clearly and convincingly. Their user-centered design approach shaped both the concept and production of the film—earning them a well-deserved gold award.



Taipei Tech Faculty Honored in MOE Teaching Practice Research Program

The Ministry of Education recently announced the recipients of its Teaching Practice Research Achievements Awards, recognizing university instructors who excel in creative teaching and applied research. Four professors from Taipei Tech received this prestigious honor, highlighting the university's leading role in innovative education.

Award-Winning Faculty and Innovations:

1. Professor Wang Chen-shu (Department of Information and Finance Management)

Wang introduced a Problem-Based Learning (PBL) approach combined with critical thinking skills in her Financial Education Analysis and Logical Thinking course. She incorporated real-world institutional research questions into the course, providing students with a hands-on framework to develop their analytical and problem-solving skills.

2. Professor Hsu Hua-yi (Department of Mechanical Engineering)

Hsu designed an interactive learning approach that combines videos, images, hands-on activities, and real-world experiments to make complex fluid mechanics concepts more accessible. Students who have worked through Hsu's labs in vortex flow, jet impact, and Reynolds number have responded that she makes abstract concepts more concrete and easier to grasp, significantly enhanced students' understanding.

3. Associate Professor Lee I-jui (Department of Industrial Design)

To help students understand ergonomic principles, Lee used a hands-on approach by having them assemble pens to simulate a production line. This exercise allowed students to experience key concepts like production efficiency, workload distribution, and human factors in manufacturing—bridging the gap between theory and real-world application.

4. Lecturer Liu Hui-wen (Foreign Language Center)

Liu utilized the AI tool Sensay to help students improve their English-speaking skills. She observed that many students were hesitant to speak English due to a lack of confidence. By using Sensay on their phones, they could practice independently without the pressure of speaking to a teacher. This self-paced approach allowed the students to build confidence, making it easier to engage in real conversations when they felt ready.

President Wang Sea-fue of Taipei Tech highlighted the university's notable achievements: Taipei Tech boasts a 21.28% award rate in MOE's Teaching Practice Research Achievements Awards, far exceeding the national average of 8.9%. Over the past decade, the university has published numerous research papers in international SSCI and SCI journals, emphasizing the significance of innovative teaching practices in faculty advancement. With these recent accolades, Taipei Tech continues to lead in innovative education, preparing students to address future industry and societal challenges effectively.

Taipei Tech Lecturer Liao Shanp-woei Wins Gold at 2024 Asia Pickleball Games

Taipei Tech lecturer Liao Shanp-woei showcased his outstanding skills at the 2024 Asia Pickleball Games, clinching the Gold Medal in the Men's Doubles 4.0 (35+) category. Competing against top players from across Asia, Liao and his partner demonstrated exceptional teamwork, strategy, and resilience to emerge victorious in this highly competitive sport.

What Does 4.0 Level Mean in Pickleball?

Pickleball rankings range from 1.0 (beginner) to 5.5+ (professional level), with 4.0 players demonstrating strong technical skills, strategic gameplay, and consistency under pressure. A 4.0 player is expected to:

- Execute reliable forehand and backhand shots with depth and control.
- Use effective dinks, volleys, and drop shots in strategic play.
- Maintain quick reflexes at the "kitchen" (non-volley zone).
- Adapt strategies and anticipate opponents' moves in high-level rallies.

Liao's gold medal win reflects his expertise and dedication to the sport, positioning him among the top amateur players in Asia.

What Is Pickleball?

Pickleball is a rapidly growing sport that combines elements of tennis, badminton, and table tennis, making it accessible and enjoyable for all ages. Unlike tennis, it requires less upper-body strength, focusing more on agility and strategy. The game's smaller court size and lighter paddle allow for faster-paced rallies while reducing the physical strain often associated with other racket sports.

One major advantage of pickleball is its accessibility. A standard badminton court can easily be converted into a pickleball court, making it convenient for schools and community centers to set up.

Encouraging More Students to Play

Liao encourages Taipei Tech students and faculty to explore different sports and stay active. His success at the Asia Pickleball Games serves as an inspiration, proving that sports are for everyone—you don't need an elite athletic background to enjoy them. Pickleball is an easy sport to pick up and a great way to stay fit while having fun.

Interested in trying pickleball? Gather some friends and hit the court—it might just become your next favorite sport!

Congratulations to Mr. Liao on this incredible achievement!

Taipei Tech's XR Therapy Cat Takes Top Prize at SIGGRAPH Asia

A team from Taipei Tech's Department of Interaction Design has developed an innovative pet robot named "Petroller," designed to interact with users in an extended reality (XR) manner and provide emotional support to assist with rehabilitation effort. The device provides tactile, visual, and auditory feedback, letting users feel like they are interacting with a real cat. Petroller won the Best Demo Award in the XR Demo section at SIGGRAPH Asia 2024 in Tokyo, drawing significant attention from global manufacturers and developers.

As global aging drives demand for healthcare and assistive technologies, Medi-Tech Insights, a Belgium-based healthcare consulting firm, predicts the care robot market will expand annually by nearly 20% from 2024 to 2029. Recognizing this opportunity, Associate Professor Han Ping-hsuan guided students Liu Ta-wei, Tseng Pei-tzu, Lu Guan-yi, Chang Kuan-ning, and Peng Jih-hsuan to create Petroller, designed explicitly for therapeutic rehabilitation and companionship.

When users wear a VR headset, the fuzzy Petroller transforms into a lifelike virtual cat through extended reality. By interacting with the physical device—such as tugging its ears, pressing on it, or squeezing it between the thighs—users trigger virtual reactions like facial expressions and emotional sounds. These simulate the nuanced behavior of a real cat, making the experience feel deeply authentic. This emotional feedback, combined with subtle physical movements, helps support rehabilitation in a way that is both comforting and engaging—especially for those familiar with the companionship of pets.

At the SIGGRAPH Asia event, many visitors were drawn to Petroller's calming, lifelike purring sounds. Tseng, a graduate student involved in the project, noted that many participants could not help but smile upon hearing the virtual cat's first meow.

Professor Han highlighted that Petroller addresses common shortcomings of existing pet robots, such as limited expressive interactions and the need for constant charging. Petroller incorporates passive components, which allow for seamless integration with any headset without requiring additional power sources, making Petroller simpler and more cost-effective for mass production. The team is eager to explore and expand Petroller's potential applications in the future.

Taipei Tech and Kyutech Host 2025 Sustainable Urban Development Workshop

Taipei Tech partnered with Japan's Kyushu Institute of Technology (Kyutech) and organized the 2025 Taipei Tech & Kyutech SDGs Sustainable Urban Development Workshop. The event was co-hosted by Taipei Tech's Research Center of Energy Conservation for New Generation of Residential, Commercial, and Industrial Sectors (RCEC), Office of Research and Development, and Office of International Affairs. Seventeen students from Kyutech participated in this international workshop held from March 5 to 7, collaborating closely with Taipei Tech students.

Taipei Tech President Wang Sea-fue highlighted the diverse backgrounds of participating students, including mechanical engineering, computer science, electrical engineering, electronics engineering, chemical engineering, materials, architecture, photonics, automation, English, and technical education. Mixed into interdisciplinary teams, students visited urban sites around Taipei, touring the city's sustainability implementations and brainstorming solutions for real-world issues like renewable energy, sustainable resource management, and social responsibility. This interaction aimed to foster sustainable thinking and practical action among students.

The workshop was led by Assistant Professor Juan Yu-hsuan from Taipei Tech's Department of Mechanical Engineering, an expert in urban wind energy and sustainable building environments. His team introduced students to vertical-axis wind turbines, a design that's more suitable for urban environments than traditional horizontal turbines. Participants created their own miniature vertical-axis wind turbines from 3D-printed components. They tested turbine performance directly, generating up to 2,000 volts from simple cardboard structures.

Through this workshop, Juan said that the students not only learned about renewable technologies but also explored practical design solutions tailored specifically for urban environments.

Professor Mito Masaki from Kyutech remarked that their institution, based in Kitakyushu—a city renowned for sustainable development throughout Asia—greatly benefited from sharing expertise with Taipei Tech, which is known for its ecological campus and green technology leadership. He hopes this partnership will continue to nurture students capable to tackle future challenges in sustainable urban development.

Taipei Tech and Sunbird Software Join Forces for Innovative R&D and Talent Development

Taipei Tech and Sunbird Software have officially established the Sunbird DCIM Research Center through a new partnership agreement. The collaboration focuses on data center infrastructure management (DCIM) and smart energy solutions, aiming to drive innovation in software technology and cultivate industry-ready talent.

President Wang Sea-fue of Taipei Tech emphasized the longstanding partnership with Sunbird Software, which began in 2016. Over the years, the collaboration has grown steadily, with two major five-year plans launched, and total investments now nearing NT$100 million—a testament to the deep trust and shared vision between the two sides.

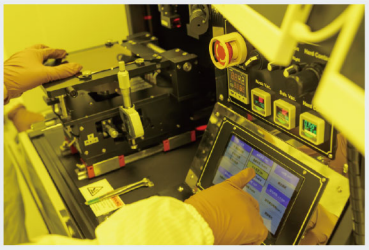
President Wang highlighted the partnership's strong emphasis on talent development, noting that Sunbird sends managers and engineers every two weeks to work with Taipei Tech's faculty and students. Over 100 students have participated in joint research projects, and over 20 have joined Sunbird as full-time employees. Additionally, many students have completed summer internships at Sunbird's Taiwan branch. Wang hopes more faculty and students will engage in cutting-edge research in data center software, energy efficiency, and artificial intelligence, helping Taiwan strengthen its presence in the international DCIM industry.

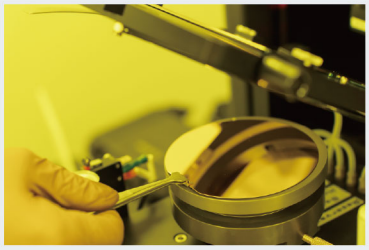
Sunbird Chairman Hsu Ching-i shared the company's vision of building a global research and development center for DCIM in Taiwan, emphasizing Taipei Tech's vital role in cultivating top software talent. Approximately 40% of Sunbird's Taiwan-based employees are Taipei Tech alumni. Through ongoing industry-academic collaboration, Sunbird aims to strengthen students' skills in software development, communication, and innovation. This collaborative effort will ultimately enhance Taiwan's competitiveness in global software R&D and advanced DCIM software development, contributing to energy efficiency and carbon reduction goals.

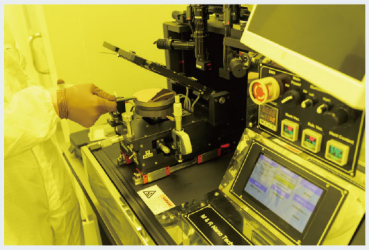
Professor Liu Chien-hung from Taipei Tech's Department of Computer Science and Information Engineering also serves as director of the joint research center. He explained that the center focuses on agile development, automated testing, code refactoring, and performance optimization. The center also focuses on stress testing and code quality analysis for DCIM software, with future plans to incorporate AI into software development and data center applications.

Taipei Tech Partners with TSMC to Launch Taiwan-Japan Semiconductor Degree Program

To address the growing global demand for semiconductor talent, Taipei Tech will launch a new International Bachelor Program of Semiconductor Manufacturing Process and Equipment in the 2025 academic year. Partnered with TSMC, this pioneering international program will enroll 40 Taiwanese and 30 Japanese students, offering a comprehensive education that incorporates hands-on, industry-aligned training.







A Gateway to TSMC and the Semiconductor Industry

This program directly responds to Taiwan's semiconductor industry's urgent need for talent, particularly in advanced manufacturing and equipment management. Taipei Tech students enrolled in this program will benefit from direct exposure to TSMC's industry expertise. The curriculum includes practical training at TSMC's Newcomer Training Center, equipping students with real-world skills and valuable industry experience.

How Students Can Join the Program

Taiwanese first-year students at Taipei Tech can apply to enter the program in their second year, allowing them to continue their studies without delay. Students interested in joining are encouraged to take foundational courses such as physics, chemistry, and calculus in their first year to prepare for the advanced semiconductor coursework.

Guaranteed Interview Opportunities at TSMC

Participants who complete the program will receive a certificate, significantly boosting their employment prospects. Graduates of the program are guaranteed an interview opportunity with TSMC.

Taipei Tech's Strategic Role

As a leading institution in mechanical and engineering education, Taipei Tech is uniquely positioned to cultivate semiconductor talent aligned with industry requirements. Its long-standing collaboration with TSMC, including previous successful semiconductor programs, underscores the university's strength in bridging academic expertise with industry needs.

International and Inclusive Approach

The program is Taipei Tech's first international undergraduate curriculum focused on semiconductors, designed to foster cultural and professional exchanges between Taiwan and Japan. To facilitate Japanese students' smooth transition, Taipei Tech provides scholarships, pre-enrollment Mandarin classes, and foundational courses.

Strong Interest from Japanese Students

Recruitment for Japanese students has already begun, with the first round of application reviews completed. Over 20 students from across Japan—including Fukuoka, Tokyo, Miyazaki, and Okinawa—have passed the initial screening. Taipei Tech will soon conduct follow-up interviews to confirm their intent to enroll and will invite admitted students and their parents to visit the campus in Taiwan.

This program represents Taipei Tech's commitment to addressing global talent shortages, creating cross-cultural educational experiences, and strengthening Taiwan's position as a global semiconductor powerhouse.

TAIPEI TECH

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