Study Semiconductor in Taiwan

Compiled by Taipei Representative Office in Singapore
Date: August 2023

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■ Programmes and Scholarship information

Welcome to join the channel "TW Semiconductor Talent Cultivation for SG" on WhatsApp to receive the updated information regarding Taiwan semiconductor talent cultivation

You may join the channel by clicking the following link or scanning the QR-code on the right side.

Short url: https://ppt.cc/ftno4x

■ General Information on Taiwan's Government Scholarship

Taiwan scholarship offered by the Ministry of Education will be prioritized to students who apply for semiconductor related departments or programmes.

Here is the detail:

✧ Duration: Undergraduate (Max. 4 years),
                Master's Degree (Max. 2 years),
                Ph.D. (Max. 4 years)

✧ Tuition and miscellaneous expenses up to NT$ 40,000 (US$ 1,333)

✧ Monthly stipend:
   NT$ 15,000 (US$ 500) for undergraduate students
   NT$ 20,000 (US$ 667) for graduate students

✧ Application timeline: from 1 February to 31 March

✧ More Information
   http://taiwanscholarship.moe.gov.tw

Note:

✎ Taiwan's Education System

In Taiwan, students can pursue higher learning at two-year and four-year colleges, and universities. University undergraduate programmes usually require 4 years of study; graduate

programmes leading to a master's degree require 1 to 4 years; and doctorate programmes require 3 to 7 years. Some programmes require an internship that can be as short as one or two months or as long as two years.

For most institutions of higher education, the academic year begins in August or September and ends in August the following year. The academic year has two semesters: the first semester is from August to early the following year, usu. January (depending on the date of Lunar New Year), and the second semester usually begins in February, and ends in July.

✎ Expense to Study in Taiwan

Taiwan is well-known as a country where you can enjoy high quality education and modern living at affordable costs. Typical costs for studying in Taiwan are set out below:

Tuition and miscellaneous academic fees	Meals	Accommodation
Universities: around US$ 1,929 - US$ 3,612 per academic year	Around US$ 180 - US$ 270 per month	On campus: around US$ 35 - US$ 100 per month
Technological Universities & Colleges: around US$ 1,615 - US$ 3,249 per academic year		Off campus: around US$ 200 - US$ 600 per month (not including utilities)

■ Reasons for Singaporean Students to Study Semiconductor in Taiwan

1. Advanced Technology with Industrial-Academic Cooperation

Under the rapid changes in the international situation and environment in recent years, the cutting-edge technology industry has become the focus of development in many countries around the world. The electronics and information communication industries based on semiconductor technology are the foundation for future technological breakthroughs and sustainable development of civilization. With the input of a large number of domestic science and technology professionals, the semiconductor industry is constantly booming in Taiwan. The semiconductor industry has become one of the most important economic pillars of Taiwan, which leads the world's most advanced semiconductor technology and becomes the world's high-end chip manufacturer.

Taiwan owns the most complete supply chain of semiconductor products, for example, TSMC is the world-famous in semiconductor manufacturing. The universities in Taiwan have the most complete semiconductor course list, which leads to comprehensive education and training of semiconductor skills.

Taiwan's semiconductor industry holds a dominant position in the global semiconductor market, thanks to its technological leadership, vertical integration capabilities, outstanding manufacturing capacity, robust supply chain, and extensive international cooperation network. In particular, Taiwan's semiconductor foundry, and packaging and testing industries consistently maintain the top position in the global market, demonstrating the significant influence of Taiwan's semiconductor industry on the global market.

Taiwan's semiconductor industry has leading technology, excellent manufacturing capabilities, and the ability to vertically integrate upstream, midstream and downstream supply chains, so it occupies a dominant position in the global semiconductor market. Taiwan is known for its high-tech industry, and its semiconductor industry is a significant contributor to the country's economy. Taiwan has a strong focus on research and development, and there are many research institutions and labs dedicated to semiconductor. Taiwan is also the home to many of the world's leading semiconductor companies, such as TSMC, UMC, MediaTek, and so on.

Taiwan is a pivotal hub in the semiconductor industry, boasting a comprehensive supply chain that covers the upstream, midstream, and downstream sectors. This well-established ecosystem makes Taiwan an attractive destination for international talent seeking to gain valuable experience in the semiconductor field.

Semiconductor Industry Clusters in Taiwan

Yilan Science Park
Longtan Science Park
Hsinchu Biomedical Science Park
Hsinchu Science Park
Chunan Science Park
Tongluo Science Park
Houli Science Park
Taichung Science Park
Erlin Science Park
Chung-Hsin New Village
Higher Level Research Park
Huwei Area
Tainan Area
Kaohsiung Area

● In operation
○ Under development or planning

187 IC Manufacturers in Hsinchu Science Park

12 IC Manufacturers in Taichung Science Park

35 IC Manufacturers in Southern Taiwan Science Park

Taiwan's Global Presence in the Semiconductor Industry in 2022

IC Design	Foundry	Packaging & Testing
Taiwan's Global Share: 21.0%	Taiwan's Global Share: 62.5%	Taiwan's Global Share: 58.2%
Taiwan ranks NO.2 (Behind U.S.)	Taiwan ranks NO.1	Taiwan ranks NO.1
2022 Production Value: US$41.5 billion	2022 Production Value: US$89.9 billion	2022 Production Value: US$23.0 billion
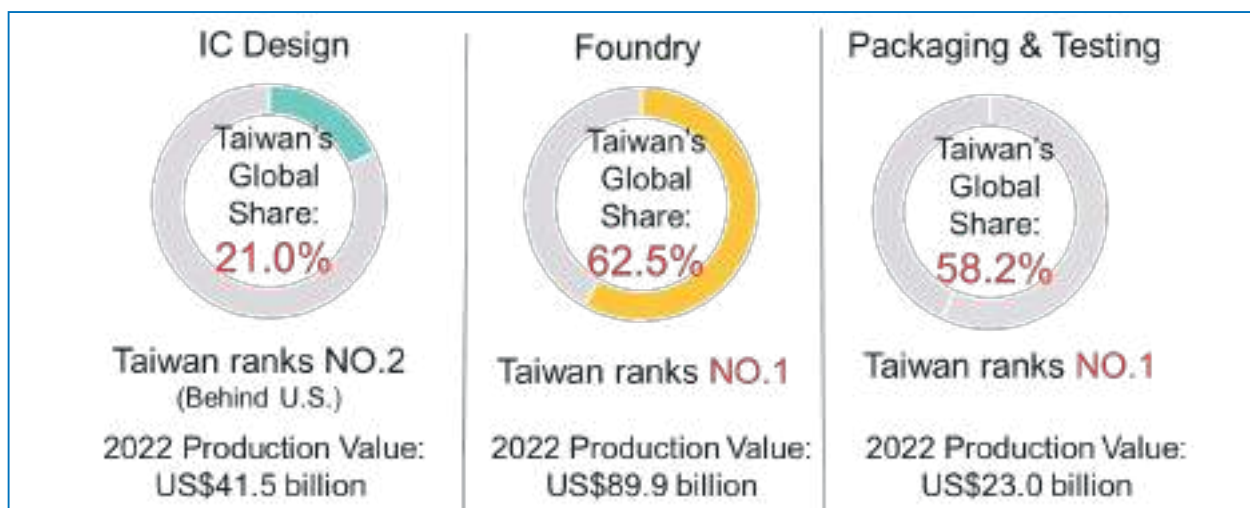
Source: Market Intelligence and Consulting Institute (MIC), Institute for Information Industry, March 2023.

The global semiconductor market is projected to surpass US$ 1 trillion by 2030, driven by the increasing demand for technologies such as AI, IoT, 5G, EV, and high-efficiency components. However, Global semiconductor industry is currently facing a significant talent imbalance.

To address this significant workforce gap in the semiconductor industry, semiconductor manufacturers must focus on strengthening ties with academia to cultivate a greater number of semiconductor technology talents. Collaborative efforts between industry and academia should be pursued to enhance competitiveness in terms of faculty, academic programmes, and industry-university partnerships. By doing so, the next generation of high-level R&D experts and multinational leaders can be nurtured, creating a mutually beneficial environment for talent, enterprises, and academia. This concerted approach will ultimately enhance the supply of skilled workers and improve the overall competitiveness of the semiconductor industry.

2. Affordable Tuition and Enormous Scholarships

Taiwan's universities offer top-quality education in semiconductor while their tuition is inexpensive and affordable. Generally speaking, tuition for undergraduate programme is around US$ 1,800 per semester or US$ 3,600 a year while tuition for graduate programme is around US$ 2,000 per semester or US$ 4,000 a year.

In addition, Taiwan's government and universities provide various scholarships to attract global excellent students, including Ministry of Education (MOE) Taiwan Scholarship Programme.

3. Improving Chinese Skills / Learning Chinese

Living and studying is the best way to learn Chinese, as you will constantly be experiencing it in daily life. If you study in Taiwan, semiconductor in particular, you are empowered with advanced skills and learn Chinese, or maintain your Chinese proficiency at the same time

4. Democracy and Freedom

Taiwan is rated 1st in Asia and 10th globally among the 167 countries and territories in the Democracy Index 2022 released by London-based the Economist Intelligence Unit. According to the 2023 Freedom in the World Report made by Freedom House, 84 of 195 nations around the world were classified as free. Taiwan was amongst these free nations, receiving a score of 94 out of 100 and scored especially high in the areas of political rights and civil liberties, second to Japan in Asia. Reporters without Borders' 2023 World Press Freedom Index Report ranked Taiwanese press freedom No. 1 in Asia. The Taiwanese government continues to promote freedom of speech as the driving force of Taiwanese democratic transformation, which is the critical foundation for academic research and innovation.

5. Most Welcoming Country with Top-Quality Life for Expats

According to the Expat Insider of the Inter-Nations, one of the world's largest and most comprehensive surveys on life abroad, Taiwan is one of the most welcoming countries with the best quality of life for expats. For instance, in 2023, 12,000 expats living in 172 countries or territories took part in the survey. Out of 53 destinations that meet the minimum requirement of sample size of 50 respondents, Taiwan ranks No. 5. In particular, Taiwan ranks No. 2 for quality of life, No. 3 for travel and transport, No. 1 for health and well-being, and No. 8 for safety and security.

6. Stay Healthy and Happy -- Various Outdoor Activities and Affordable Medical Expense

Loving outdoor activities? Taiwan, mountainous while surrounded by sea, offers various mountain and water sports. For most places, it can only take 2 hours to reach mountain or sea.

According to a documentary film of the National Geographic channel, Taiwan's medical service is ranked as No. 3, next to the USA and Germany. According to the Numbeo Health Care Index by country 2023 mid-year, Taiwan has claimed top spot for successive five years. In addition, Taiwan is highly praised for its outstanding National Health Insurance System. Overseas students have the access to the insurance scheme and can visit any specialist in Taiwan if it is needed.

■ Semiconductor Talent Cultivation Programmes in Taiwan

Taiwan has several universities that are renowned for their semiconductor-related programmes. Here are eight selected ones: (listed in alphabetic order with public university first)

(1) National Cheng Kung University (NCKU)
(2) National Sun Yat-sen University (NSYSU)
(3) National Taipei University of Technology (NTUT)
(4) National Taiwan University (NTU)
(5) National Tsing Hua University (NTHU)
(6) National Yang Ming Chiao Tung University (NYCU)
(7) Lunghwa University of Science and Technology (LHU)
(8) Minghsin University of Science and Technology (MUST)

Consultation information

University	Contact

National Cheng Kung University (NCKU)	**AISSM Facebook:** https://www.facebook.com/ncku.ais2m/
	 AISSM Website: https://ais2m.ncku.edu.tw/
	 AISSM EMAIL: ncku_ais2m@mail.ncku.edu.tw
	 Contact(,Office of Academic and Student Affairs):
	   1. Deputy Director, Ms. Weili Teng, wlteng@ncku.edu.tw
	   2. Project Officer, Chih-Ching Liu (Kacie), kacieliu@gs.ncku.edu.tw
	 OIA Facebook: https://www.facebook.com/funatncku/?epa=SEARCH_BOX
	 OIA Website: https://oia.ncku.edu.tw/?Lang=en
	 OIA EMAIL:
	   (1) Admission Application (reserved for International Students): overseas@ncku.edu.tw
	   (2) Overseas Recruitment and Admission (Official Email): em50951@email.ncku.edu.tw

National Sun Yat-Sen University (NSYSU)	**NSYSU website:** https://www.nsysu.edu.tw/?Lang=en **Office of Admission Strategy:** Contact: Wen Jiat Lee Office: +886-7-5252000 #2149 Email: nsysu-shss@mail.nsysu.edu.tw WhatsApp: WENJIAT (QR Code shown as right) **Contact of Office of International Affairs:** (1) +886-7-5252634 (for Partnership/Exchange) (2) +886-7-5252632 (for Degree Programmes)
National Taipei University of Technology (NTUT)	Professor TAN-HSU TAN thtan@ntut.edu.tw
National Taiwan University (NTU)	⊘ No. 1, Section 4, Roosevelt Road, Taipei 106319, Taiwan ✉ NTU email: intadmission@ntu.edu.tw 📞 +886-2-3366 2007
National Tsing Hua University (NTHU)	Email: drs@my.nthu.edu.tw Phone: +886-3-5162464 Address: No. 101, Section 2, Kuang-Fu Road, Hsinchu, Taiwan
National Yang Ming Chiao Tung University (NYCU)	**National Yang Ming Chiao Tung University** https://en.nycu.edu.tw **NYCU Facebook** https://www.facebook.com/YangMingChiaoTung **NYCU Email** sec@nycu.edu.tw **NYCU Instagram** https://www.instagram.com/yangmingchiaotung/ **NYCU Youtube** https://www.youtube.com/channel/UCzMQXhrCiDHdnEOQfasVA7g/featured **NYCU Linkedin** https://www.linkedin.com/school/nycu/ **NYCU Twitter** https://twitter.com/i/flow/login?redirect_after_login=%2FNYCU_official **College of Electrical and Computer Engineering (ECE)** https://ece.nycu.edu.tw/eng/latestevent/index.aspx?Parser=9,11,98,90 **Contact ECE** jmhsu@nycu.edu.tw **Nano Facility Center** https://nanofc2.web.nycu.edu.tw **Contact Nano Facility Center** nanofc@nycu.edu.tw

Lunghwa University of Science and Technology (LHU)	Dr. Chung-Lin Huang (Alston) **Title:** Dean, Office of International and Cross-Strait Cooperation. **Email:** alston@mail.lhu.edu.tw **WhatsApp:** Alston - LHUST WhatsApp 連絡人
Minghsin University of Science and Technology (MUST)	**Contact:** Neo Chang **Office:** +886- 3-559-3142#1279 **Email:** neoyc@must.edu.tw **WhatsApp:** https://chat.whatsapp.com/C7VlfvMasXs5MtwqLTGQJU (QR Code shown as right) **Telegram** MUST's Technician Cultivation in the Semiconductor Industry https://t.me/MUST_Telegram

■ National Cheng Kung University (NCKU)

➢ Why NCKU?

Studying at NCKU offers advantages such as the university's reputable standing in a comprehensive environment. NCKU's Academy of Innovative Semiconductor and Sustainable Manufacturing is the first to launch at a university to address the nation's high-tech talent constraints and the imperative for advancing semiconductor technology during the AI era based on the National Cheng Kung University's well-established research foundation in science and engineering; The Academy is also the only one that has the advantage of cooperating with non-semiconductor manufacturers and provide the opportunity to be part of Taiwan's semiconductor hub in Southern Taiwan Science Park (STSP).

RANKING & PERFORMANCE

2023 Impact Ranking
in Taiwan **Top One**

#24 Worldwide

Industry Income
Top One

2023 QS World Ranking

#224

#36 in Asia

● **NCKU ranked first in the Global Vision Magazine Survey (2022) on Best University for Employability in Taiwan, 8 years in a row.**

With more than 190,000 living alumni, NCKU graduates have reached various notable and influential positions in business, politics, and academics. NCKU has been affiliated with 1 Nobel laureate, 15 Academia Sinica academicians, and many CEOs of listed companies in Taiwan and around the world.

⬩ Has a total of more than 20,000 students, including 2,119 international, overseas and mainland Chinese students, from more than 76 countries or districts and 5 continents.

3.8%
Overseas Chinese Students

0.8%
Mainland Chinese Students

9.5%
Foreign Students

90.5%
Taiwanese Students

4.9%
International Students
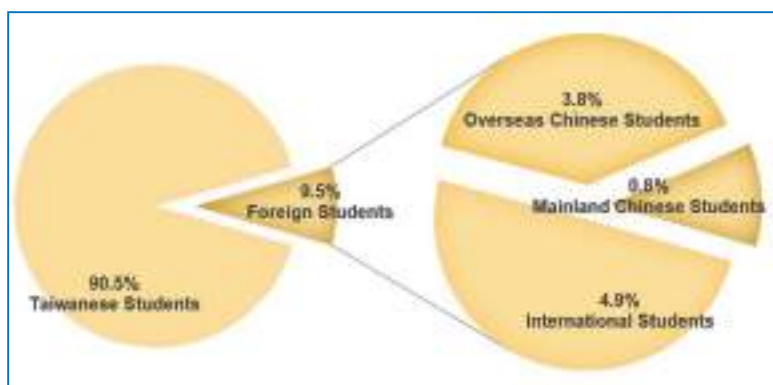
➢ **What semiconductor talents cultivation programme does NCKU have?**

NCKU has excelled in the Higher Education Impacts Ranking 2022 and launched the first semiconductor academy purposed-built with the support of industry and the government in top Taiwanese universities in 2021.

* The Academy offers 70 courses in English. Some programmes have sufficient courses offered in English for students to satisfy graduation requirements. Nevertheless, the students can take courses from other departments in NCKU related to their specializations, it also can be recognized as graduation credits according to each program's regulation.

5 MS and PhD programmes in Critical Technology equipped with core competences in Artificial Intelligence and Sustainability
Integrated Circuit Design
Semiconductor Manufacturing Technology
Semiconductor Packaging and Testing
Key Materials
Smart and Sustainable Manufacturing

CORE COMPETENCE	
AI-centric: AI / Big Data / Cloud Computing	
Subject	**Course Title**
Artificial Intelligence (must choose one)	Introduction to Artificial Intelligence Big Data and Cloud Computing
Energy-driven:Smart Manufacturing / Energy Efficient / Carbon Net Zero	
Subject	**Course Title**
Sustainability (must choose one)	Introduction to Sustainable Energy Materials And Devices For Sustainable Energy

● **Programme on Integrated Circuit Design**

Supported with the professional and well-experienced teachers, this programme on integrated circuit design, which emphasizes the perspective of "issues in the industry and problem-solving in the school," will provide the students various kinds of IC design courses to breed their basic

capability and advanced skills for the IC chip designs.

The courses we will offer include Smart Security Internet of Things / Artificial Intelligence, Bio-medical/Bio-Sensing, Memory Integrated Circuits Design / Computing in Memory, Advanced Mix-signal IC Designs, RF Communications / mm-Wave Sensor Technologies etc..

We hope what the students will learn can be well joined to the industry and we also hope to cultivate the knowledge for the students, in both the Master and PhD degrees, to meet the needs of the industry.

● Programme on Semiconductor Manufacturing Technology

This industry-sponsored programme cultivates students' professional capability in the areas of semiconductor devices and process technology. The curriculum is jointly planned and offered by the industry experts. The students should learn the most practical and state-of-the-art skills in dealing with the device miniaturization and power scaling for future technology nodes. The programme conducts extensive research into the design and technology development of nano-electronic and photonics devices, green electronic devices, and semiconductor sensors.

● Programme on Semiconductor Packaging and Testing

Semiconductor packaging and testing is the key to manufacturing a fully functionalized and durable electronic device. Our programme integrates the relevant courses offered at National Cheng Kung University, Taiwan and cooperates with the industry to achieve the goal of cultivating semiconductor packaging and testing professionals. The curriculum covers the three major areas: packaging processes, packaging and testing smart manufacturing, and packaging and testing materials. Industrial professionals are also hired to offer practical courses so that students have both academic foundations and practical experience. In terms of thesis research, it is implemented based on the concept of industry proposition and academic problem-solving. Graduates from this programme are expected to have a higher priority in recruitment in related industries after graduation.

● Programme on Key Materials

The programme on key materials offers material-related courses and research topics, targeting on two categories of advanced materials. The first is the semiconducting materials including the start-of-the-art technology in the wide-band gap semiconductors as well as the emergent two-dimensional materials. The second is the so-called functional materials which contain the novel materials with promising potential for the application in various fields such as the clean energy, memory, devices, catalysis, sensing, and quantum computing.

● **Programme on Smart and Sustainable Manufacturing**

With the emerging challenge of climate changes, sustainable manufacturing technologies are required for enterprises to achieve the goal of carbon neutrality. The programme on Smart and Sustainable Manufacturing welcomes students with engineering or scientific backgrounds who are interested in advanced high-efficient manufacturing technologies, e.g., simulation-assisted process design, additive manufacturing, and artificial intelligence, as well as sustainable manufacturing technologies, e.g., hydrogen-based metallurgy, CO_2 capture, usage and storage, and circular economics.
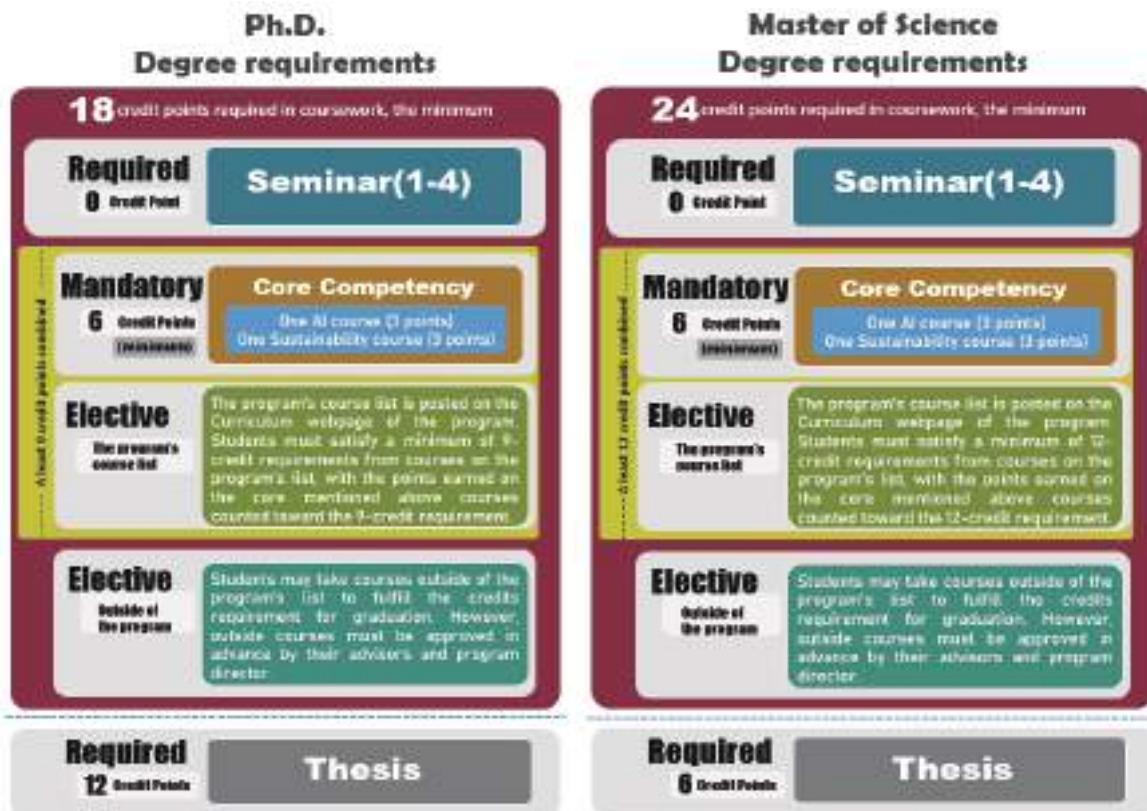
over **100** students annually
-master's: 80%
-doctoral: 20%

5 programs
173 Faculty members from departments related to the semiconductor industry
Industry Experts

Advanced Semiconductor Engineering Inc. (ASE)	
- semiconductor assembly, testing & packaging	
China Petrochemical Development Corporation	
- specialty chemicals; polymerization; engineering plastic	
China Steel Corporation (CSC)	
- steel plates; steel Bar and wire rods; hot-rolled coils & sheets; cold-rolled coils	
Delta Electronics	
-power electronics; automation; ICT, energy infrastructure	
Diodes Incorporated	
-application specific standard products within the broad discrete, logic, and analog semiconductor markets	
Himax Technologies	
-integrated circuits	
LCY Chemical Corp.	
-petrochemical products	
Macronix	
-serial NOR flash; parallel NOR flash; octabus memory; wide range vcc flash	
Novatek Microelectronics Corp	
-display driver IC; SoC	
Powerchip Semiconductor Manufacturing Corp. (PSMC)	
-DRAM, flash memory, foundry services	
TAYA Group	
-energy & telecom cable; magnet wire; investment and copper management; construction	
Transcom, Inc.	
-PA MMIC; FET transistor; amplifier, SSPA	

93 plus JDPs with 17 industry partners, 2022

TSMC	
-semiconductor contract manufacturing and design	
United Microelectronics Corporation	
-semiconductor foundry	
Win Semiconductors	
-GaAs MMIC	
Windbond	
-mobile DRAM; specialty DRAM; flash memory	
YAGEO	
-passive component	

➢ **Degree Requirements**

Ph.D.
Degree requirements

18 credit points required in coursework, the minimum

Required 0 Credit Point	Seminar(1-4)
Mandatory 6 Credit Points (minimum)	**Core Competency** One AI course (3 points) One Sustainability course (3 points)
Elective The program's course list	The program's course list is posted on the Curriculum webpage of the program. Students must satisfy a minimum of 9-credit requirements from courses on the program's list, with the points earned on the core mentioned above courses counted toward the 9-credit requirement.
Elective Outside of the program	Students may take courses outside of the program's list to fulfill the credits requirement for graduation. However, outside courses must be approved in advance by their advisers and program director.
Required 12 Credit Points	Thesis

Master of Science
Degree requirements

24 credit points required in coursework, the minimum

Required 0 Credit Point	Seminar(1-4)
Mandatory 6 Credit Points (minimum)	**Core Competency** One AI course (3 points) One Sustainability course (3 points)
Elective The program's course list	The program's course list is posted on the Curriculum webpage of the program. Students must satisfy a minimum of 12-credit requirements from courses on the program's list, with the points earned on the core mentioned above courses counted toward the 12-credit requirement.
Elective Outside of the program	Students may take courses outside of the program's list to fulfill the credits requirement for graduation. However, outside courses must be approved in advance by their advisers and program director.
Required 6 Credit Points	Thesis

➢ **Application Information**

Foreign Students

National Cheng Kung University foreign students admission application schedule		
quarter class	fall class	spring class
Application period	Mid-January ~ March 30	Early July ~ September 30
Application for Admission Deadline	March 30	September 30
Announcement of Admission List & Scholarship Information	May 30	November 15
Send review results and admission notice	June 20	December 05

Exchange Students

1. Nomination by sister school	Autumn semester (September-January) admission, The deadline for nominations is **April 1**. For spring semester (February-June) enrollment, The deadline for nominations is **October 1**.	Kindly invite the teachers of the sister school to fill in the online nomination form (website will be sent separately) and submit the nomination list of your school. According to the nomination list and the number of exchange students agreed upon in the contract between the two schools, our school will receive the application and review it.
2. Online application for exchange students	Autumn semester (September-January) admission, The application deadline is **April 10**. For spring semester (February-June) enrollment, The application deadline is **October 15**.	Nominated students should prepare all the necessary documents before the application deadline and upload them to the NCKU Exchange Student Online Application System. Go to the homepage and register a new account with your usual email address to start the application process. (Non-nominated students) Self-funded students please email to em50961@email.ncku.edu.tw first .
3. Review and admission	4-6 weeks after the application deadline for each period, the department can complete the review. The admission result will be notified by email. After the student confirms the enrollment, the admission documents and registration information will be sent separately.	

※Partner universities in Singapore: National University of Singapore, Nanyang Technological, University, Singapore Management University, and Singapore University of Technology and Design.

➢ **Scholarship Information**

NCKU AISSM Scholarship -applicable to all overseas students-

Master's students	PhD students

◆ Monthly Stipend:
  ~US$ 645 for 12 months per year
◆ Duration: up to two years
◆ Awardees are selected during application for admission.
◆ An annual evaluation on the awardee's academic achievement applies to be qualified for continuation in the second year.
	◆ Monthly Stipend:
	  ~US$ 1,300 for 12 months per year
	◆ Duration: up to four years
	◆ Awardees are selected during application for admission.
	◆ An annual evaluation on the awardee's academic achievement applies to be qualified for continuation in the second and later years.

* For Overseas Chinese students, they can also apply for the scholarship from the Office of International Affairs

NCKU AISSM SUMMER SCHOOL

NCKU AISSM Summer School

The Essentials of Semiconductor Technology and Supply Chains

Date: Every Summer Vacation

Stay Tuned!

Enterprise Visiting- 1 Day Program

A one-day intensive course at the world-leading company to learn theory with practice of cutting-edge technology

臺南 **Tainan, Cultural Tour**

TAIWAN'S OLDEST CAPITAL CITY

Welcome, for students from all over the world to join us!

Core Course – 2 credits

Learn about semiconductor supply chains and the core technologies involved in semiconductor manufacturing.

Subjects

▷ Integrated Circuit Design

▷ Semiconductor Manufacturing Technology

▷ Semiconductor Packaging and Testing

▷ Key Materials

▷ Smart and Sustainable Manufacturing

Language: All courses are offered in English

Number of Participants: Max. of 30 students

Eligibility: senior undergraduate or new graduate students with engineering or science background

Format: On-campus

Completion: NCKU transcript

Sponsored by

oia Office of International Affairs

∧ISM Academy of Innovative Semiconductor and Sustainable Manufacturing

# ■ National Sun Yat-Sen University (NSYSU)

➢ Why NSYSU?

Established in 1980 in Kaohsiung, National Sun Yat-sen University (NSYSU) is a top comprehensive research university in Taiwan, with 10 colleges offering 24 undergraduate, 52 master's, and 32 PhD programmes. Key research areas include aerosol science, business data analysis, crystal growth, ocean current power generation, 6G, and cybersecurity. With its outstanding research performances, NSYSU has become a top research-oriented university with a balanced emphasis on both humanities and technology.

★ **World Rankings:** QS World University Rankings 2023—# **428** in the world; QS World University Rankings by Subject 2023—# **4** in Taiwan

★ **International Accreditation:** IEET

★ **Benchmark bilingual university granted by the Ministry of Education:** NSYSU has established **11** undergraduates, **6** master's, and **3** PhD English programmes in AY2023/24, and will add more.

In recent years, the announcement of investments in Kaohsiung by international technology giants such as TSMC has greatly contributed to the development of the semiconductor S-Corridor in the southern region. The S-Corridor, centered around the Nanzih Industrial Park, extends north to Ciaotou, Lujhu, and the Southern Taiwan Science Park in Tainan. It also reaches south to Renwu, Daliao, Linyuan, and the Siaogang industrial areas, along with the Kaohsiung Software Technology Park, forming a comprehensive cluster of supply chain covering semiconductor materials, wafer manufacturing, and packaging and testing.
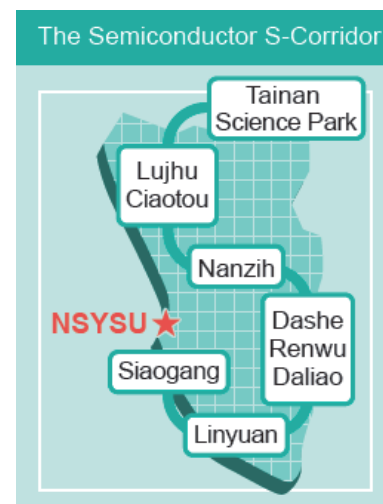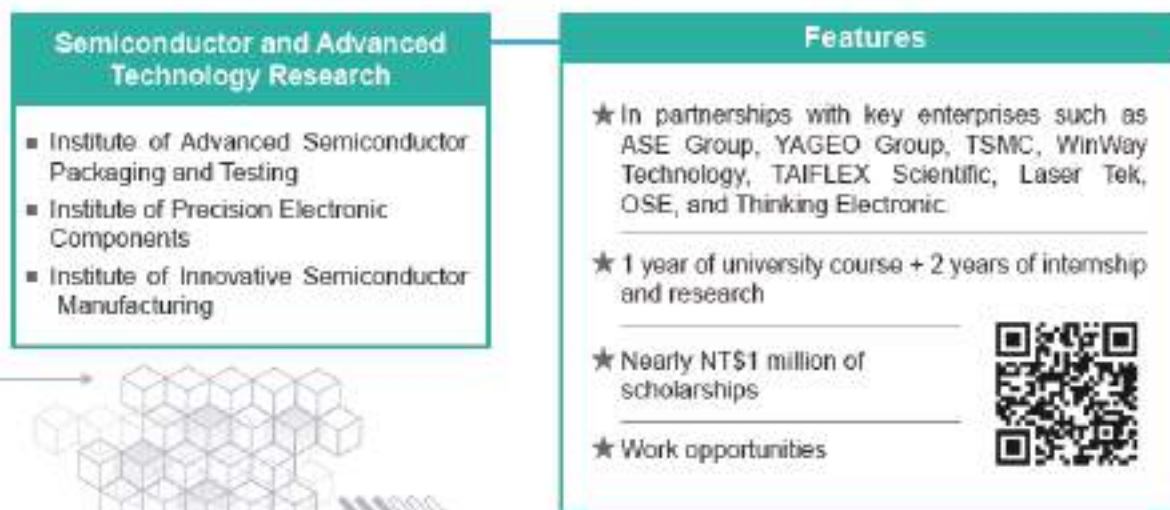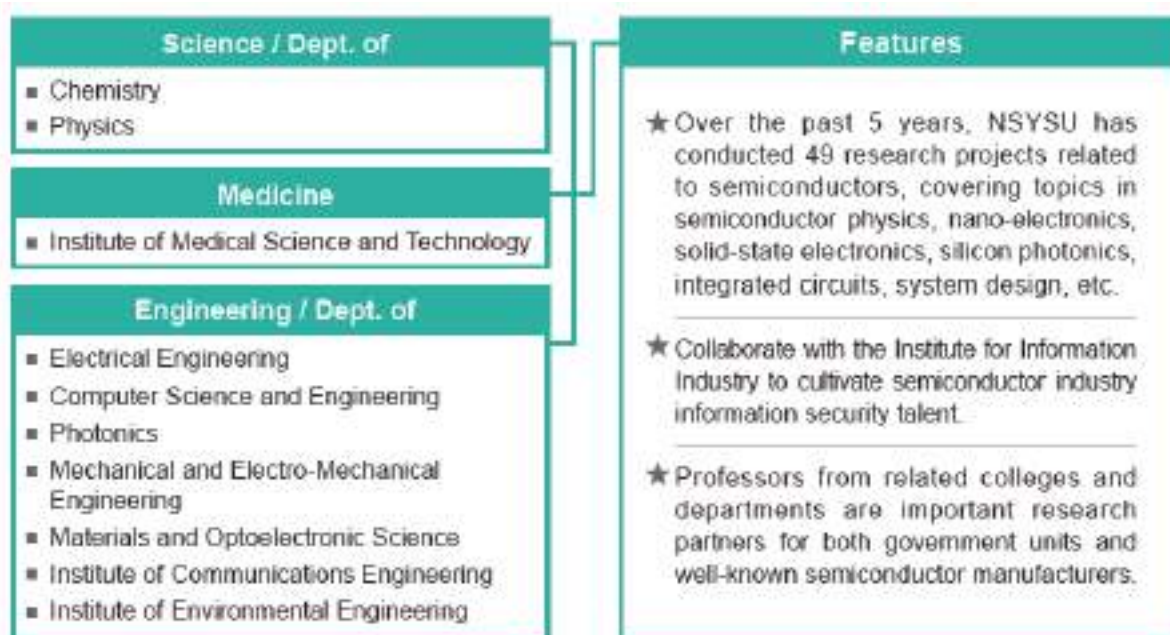
Taking advantage of its geographical position, NSYSU, located in the heart of the growing semiconductor S-Corridor, has established itself as a prominent talent hub for the semiconductor industry in southern Taiwan. NSYSU's objective is to nurture semiconductor professionals in the region through the integration of its College of Science, Engineering, Medicine, and Semiconductor and Advanced Technology Research.

Related research in these colleges includes macromolecular materials, IC design, nanodevice development and fabrication, process integration, advanced equipment and technology, and packaging and testing. NSYSU collaborates closely with local semiconductor industry clusters to promote the flow and integration of resources and talents between industry and academia.

➢ **What semiconductor talents cultivation programme does NSYSU have?**

● **Colleges and departments related to the semiconductor industry**

Science / Dept. of	Features
▪ Chemistry ▪ Physics	★ Over the past 5 years, NSYSU has conducted 49 research projects related to semiconductors, covering topics in semiconductor physics, nano-electronics, solid-state electronics, silicon photonics, integrated circuits, system design, etc.
Medicine ▪ Institute of Medical Science and Technology	
Engineering / Dept. of ▪ Electrical Engineering ▪ Computer Science and Engineering ▪ Photonics ▪ Mechanical and Electro-Mechanical Engineering ▪ Materials and Optoelectronic Science ▪ Institute of Communications Engineering ▪ Institute of Environmental Engineering	★ Collaborate with the Institute for Information Industry to cultivate semiconductor industry information security talent. ★ Professors from related colleges and departments are important research partners for both government units and well-known semiconductor manufacturers.

Semiconductor and Advanced Technology Research	Features
▪ Institute of Advanced Semiconductor Packaging and Testing ▪ Institute of Precision Electronic Components ▪ Institute of Innovative Semiconductor Manufacturing	★ In partnerships with key enterprises such as ASE Group, YAGEO Group, TSMC, WinWay Technology, TAIFLEX Scientific, Laser Tek, OSE, and Thinking Electronic. ★ 1 year of university course + 2 years of internship and research ★ Nearly NT$1 million of scholarships ★ Work opportunities

- ## Facts & Figures
  - ★ **53** faculty members with a background in semiconductor research
  - ★ **3,810** students in semiconductor-related fields from **26** countries in Asia, Europe, North America, South America and Africa, including:

    670 in College of Science

    2,963 in College of Engineering

    64 in College of Medicine

    113 in College of Semiconductor and Advanced Technology Research
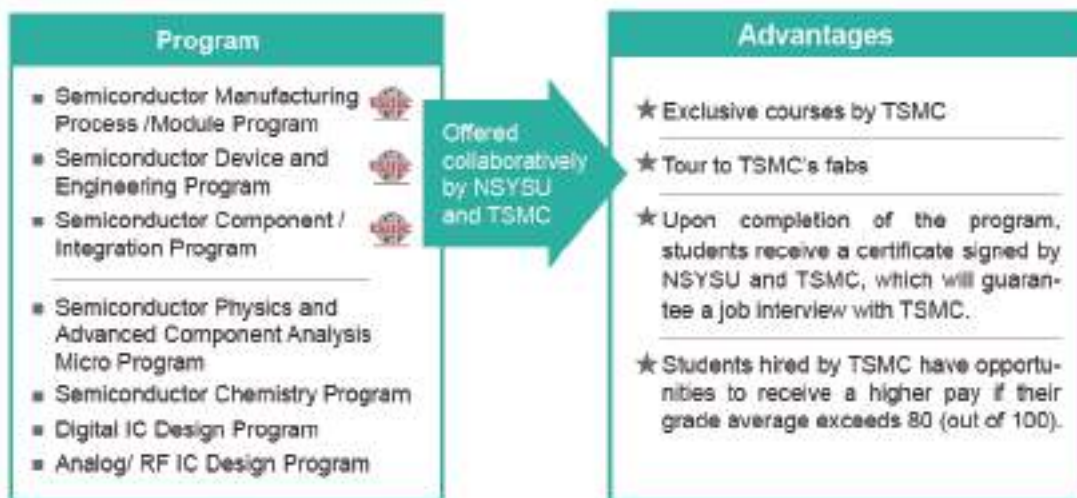 - ★ **4,944** graduates in the past 5 years

Programmes

- ## Departments and Institutes

	Undergraduate programmes		Master / PhD
English programmes	**Science / Dept. of** ● Chemistry ● Applied Mathematics ● Biological Sciences ● Physics	**Engineering / Dept. of** ● Electrical Engineering ● Photonics ● Computer Science and Engineering ● Mechanical and Electro-Mechanical Engineering ● Materials and Optoelectronic Science	**Science / Dept. of** ● Chemistry ● Physics
			Medicine ● Institute of Medical Science and Technology
	Management International Business Bachelor Program	**Marine Sciences / Dept. of** Department of Marine Biotechnology and Resources	**Engineering / Dept. of** ● Electrical Engineering ● Photonics ● Computer Science and Engineering ● Mechanical and Electro-Mechanical Engineering ● Materials and Optoelectronic Science ● Mechanical and Electro-Mechanical Engineering ● Institute of Communications Engineering ● Institute of Environmental Engineering
Programme in Interdisciplinary Studies	● Students may choose their academic areas of expertise based on their own interests and take courses accordingly. ● Areas of expertise in the programme will be recorded on the graduation certificate.		

- ## Add-on Certificate Program
  - ◆ **Semiconductor Program**

  NSYSU collaborates with TSMC to offer a Semiconductor Program, which aims to cultivate semiconductor talents. Upon meeting the program's course and credit requirements, students will have the programme name listed on the graduation diploma.

Program		Advantages
▪ Semiconductor Manufacturing Process /Module Program ▪ Semiconductor Device and Engineering Program ▪ Semiconductor Component / Integration Program	Offered collaboratively by NSYSU and TSMC	★ Exclusive courses by TSMC ★ Tour to TSMC's fabs ★ Upon completion of the program, students receive a certificate signed by NSYSU and TSMC, which will guarantee a job interview with TSMC.
▪ Semiconductor Physics and Advanced Component Analysis Micro Program ▪ Semiconductor Chemistry Program ▪ Digital IC Design Program ▪ Analog/ RF IC Design Program		★ Students hired by TSMC have opportunities to receive a higher pay if their grade average exceeds 80 (out of 100).

International Exchange Student
✧ **266** partner universities from **43** countries around the world, including National University of Singapore, Nanyang Technological University and Singapore Management University.
✧ **Student exchange** agreements with **209** partner universities, including Nanyang Technological University and Singapore Management University.
✧ **918** exchange students from Singapore were hosted over the past decade.
✧ Students can take professional courses from different colleges and select courses from the Semiconductor Program.
✧ The Semiconductor **Programme** International Student Class will be established when the minimum number of student requirement is met.
  ★ Upon completion of the required courses and meeting credit requirements, students will receive a certificate for the Semiconductor Program.
✧ Buddy Program
✧ Cultural Immersion Activities
✧ Free Chinese Language Courses

Application Information

Semester Period

Fall: Early September to early January | Spring: Mid-February to late June

✧ International Degree Students

	Fall Admission	**Spring Admission**
Application Period	January 15 to March 15	August 1 to September 30
Admission Notification	Early June	Early December
Application	Please refer to the website for online application details.	

✧ Incoming Exchange Students

	Fall Admission	**Spring Admission**
Nomination Deadline	April 20	November 20
Application Period	March 15 to April 30	October 15 to November 30
Application	Please refer to the website for online application details.	

✧ Overseas Chinese students

	Apply directly to NSYSU	**Apply through Taiwan University Entrance Committee**
Application Period (Fall Admission only)	**First Application Period:** October to November **Second Application Period:** May to June	**Individual Application:** November to mid-December Joint Application-based Admission: Mid-December to late February
Application	Please refer to the website of "Office of Academic Affairs-Admission and Testing Information" for online application details.	Subject to announcement by Taiwan University Entrance Committee for Overseas Chinese Students

★ Overseas Chinese students who meet the qualification defined by the Overseas Community Affairs Council may apply through this channel. For relevant regulations, please refer to https://www.ocac.gov.tw/OCAC/

➢ **Scholarship Information**

- Scholarships and grants for International Degree Students
- Undergraduate Students: NT$ **6,000**/month
- Master Students: Tuition Waiver
- Doctoral Students: Tuition Waiver + NT$ **15,000**/month

- Scholarships and grants for Overseas Chinese students
- NSYSU and the Overseas Community Affairs Council Joint Scholarship
  (applicable from AY2024/2025)
  Undergraduate Students: from NT$ **150,000** to NT$ **390,000**/year,
  maximum duration is **4** years.
- NSYSU Siwan Overseas Chinese, Hong Kong and Macao Student Scholarship
  Undergraduate Students: NT$ **30,000**/student
  For master's and doctoral students, please refer to the application guidelines for more
  information.

- Corporate Scholarships, The College of Semiconductor and Advanced Technology Research
- Up to NT$ **1,000,000**/student

Exchange Programmes and summer camps between NSYSU and Singaporean universities

Partner universities in Singapore: National University of Singapore, Nanyang Technological University and Singapore Management University; student exchange agreements in place with Nanyang Technological University and Singapore Management University.

918 exchange students from Singapore were hosted over the past decade.

■ National Taipei University of Technology (NTUT)

➢ Why NTUT?

National Taipei University of Technology (NTUT), also known as Taipei Tech, was established in 1912, in response to the rapid growth of Taiwan industry. With over a century of long-standing history and experience in education, Taipei Tech has nurtured numerous technical professionals. Taipei Tech graduates are the top favorites of Taiwan's top 1,000 enterprises by Cheers and other career magazines. We have put great efforts to cultivate many elites for Taiwan's technological and industrial development. Due to the accumulated experience from long-term industrial cooperation, NTUT has the ability to forward-looking more innovative and deeper industrial-based research.

NTUT at a Glance - Quick Facts

- Year Founded: 1912
- School Type: Public, Urban
- 7 Colleges: 19 Departments
  - ✧ 34 Master's programmes
  - ✧ 22 Ph.D. programmes
- Student Enrollment: 13,269s
  (B: 6,369s /M: 3,273s /D: 710s /C.E.: 2917)
- Int. Student: 1,090 (66 countries)
- Faculty & Staff: 2,124
- Int. Faculty Ratio: 10.5%

- **95%** Employment rate
- **360** licensing-and production-ready patents
- **No. 1** in High Rise Building of UI Green Metric World University Rankings (2022)
- **One** of the six governmental supported Institutes (iFIRST) aims for National Core Strategic Industries Transformation launched in 2022 (in AI, Cyber Security and SEMICON-DUCTORS)

World Rankings: QS World University Rankings 2024—# **431** in the world;

QS World University Rankings by Engineering & Technology 2023—#**169** (**3rd** in TW)

International Accreditation: IEET and AACSB

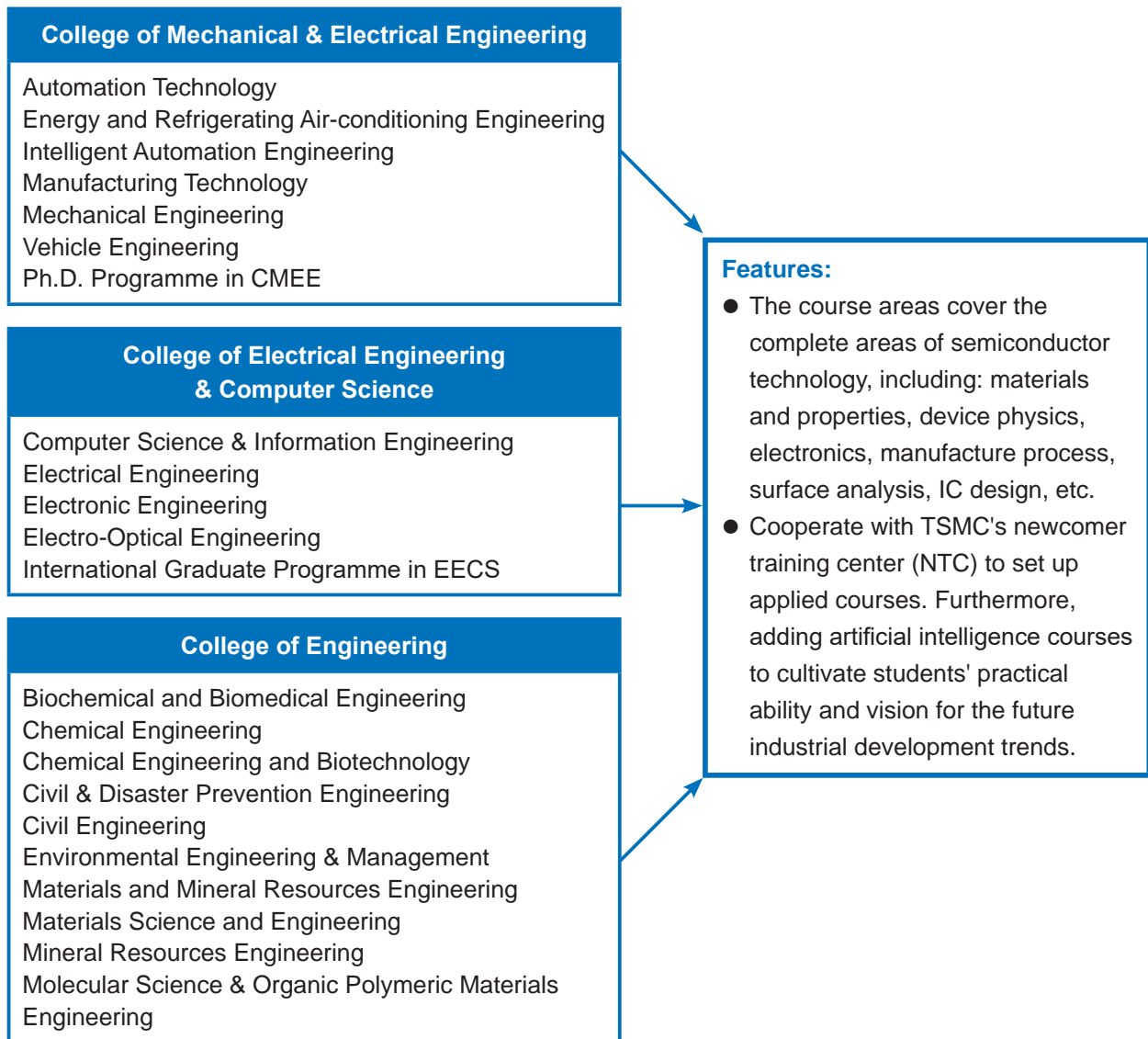## Advantages of Semiconductor Talent Cultivation at NTUT

NTUT is the Number One Paradigm Technological University for its research and academic excellence. NTUT alumni have contributed considerably to the economic development of Taiwan, and have won wide praise from businesses of all industries. Taipei Tech graduates

are the top favorite employees among Taiwan's top 1000 enterprises. About 10% of founders, board directors, and CEO of Taiwan's listed stock companies are NTUT alumni. Studying at NTUT would allow one to learn about the latest technologies and trends in this industry and potentially network with industry professionals. NTUT's campus is located at the center of Taipei Metro System. With convenient access to the MRT, it is easy to reach many technology and/or science parks around Taipei, New Taipei City, and Hsinchu City. For example, many IC design companies, and semiconductor manufacturers are located in the area of NanKang Software Park, Neihu Science Park, the Great Neihu Technology Park, and the Science Park in Hsinchu. NTUT students or graduates thus have great opportunities to do their intern training.

NTUT helps PI to establish close collaborations with semiconductor industry and has been recognized as a leading position in contamination control for semiconductor wafer fabrication as well as cleanroom and high-tech facility technology. The most notable collaborations were with Taiwan Semiconductor Manufacturing Company (TSMC) on a solution of controlling wafer micro-contamination. The newly developed manufacturing process based on NTUT technology has been adopted by Intel and Micron, and further implemented in TSMC's new factory in Arizona. NTUT provides the complete sets of semiconductor curriculum, including undergraduate Semiconductor Micro Program, undergraduate Semiconductor Program, undergraduate Semiconductor Advanced Program, and International Master Programme in Semiconductor Science and Technology (see below for details). Study at NTUT not only can receive the primary background in semiconductor technology, but also can benefit the research accomplishments from multifold aspects in semiconductor research. Through the great connection with alumni and from semiconductor industry-academic cooperation, the NTUT graduates will easily get jobs and be recognized in the semiconductor companies.

➢ **What semiconductor talents cultivation programme does NTUT have?**

● **Colleges and departments related to the semiconductor industry**

College of Mechanical & Electrical Engineering
Automation Technology Energy and Refrigerating Air-conditioning Engineering Intelligent Automation Engineering Manufacturing Technology Mechanical Engineering Vehicle Engineering Ph.D. Programme in CMEE

College of Electrical Engineering & Computer Science
Computer Science & Information Engineering Electrical Engineering Electronic Engineering Electro-Optical Engineering International Graduate Programme in EECS

College of Engineering
Biochemical and Biomedical Engineering Chemical Engineering Chemical Engineering and Biotechnology Civil & Disaster Prevention Engineering Civil Engineering Environmental Engineering & Management Materials and Mineral Resources Engineering Materials Science and Engineering Mineral Resources Engineering Molecular Science & Organic Polymeric Materials Engineering

Features:
● The course areas cover the complete areas of semiconductor technology, including: materials and properties, device physics, electronics, manufacture process, surface analysis, IC design, etc.
● Cooperate with TSMC's newcomer training center (NTC) to set up applied courses. Furthermore, adding artificial intelligence courses to cultivate students' practical ability and vision for the future industrial development trends.

● **Facts & Figures**

36 faculty members with a background in semiconductor research.

341 international students from a total of 85 partner universities in 20 different countries.

1,076 students in College of Electric Engineering and Computer Science.

1,013 students in College of Engineering.

785 students in College of Mechanical and Electrical Engineering.

36 students in Innovation Frontier Institute of Research for Science and Technology (past 1 year).

Above data from the past 5 years. (Data collected from 2019-23.)

Programmes

Undergraduate Semiconductor Credit Programmes

Semiconductor Micro Program: 11 credits			
Subject I: Semiconductor Processing		Subject II: Semiconductor Equipment	
Course Name	C	Course Name	C
Characterization of Materials	3	Adaptive Controls	3
Concept of Nanotechnology	3	Applications of Industrial Automation Controller	3
Electronic Solid-State Device	3	Artificial intelligent and machine learning	3
Fabrication Technology of Semiconductor Devices	3	Automatic Control	3
Introduction of Equipment Components in Semiconductor	2	Automatic Mechanism Design	3
Introduction to Nano-materials	3	Control System	3
Introduction to Semiconductor Device	3	Electron Microscopy	3
Introduction to Semiconductor Manufacturing Technology	3	Experiments and Design for Automatic Systems	3
Introduction to Semiconductor Processing	3	Integrated Circuit Fabrication Process	3
Introduction to Thin Film Science & Engineering	3	Introduction of Equipment Components in Semiconductor	2
Materials and Surface Analysis	3	Introduction to Automation System	3
Materials Synthesis	3	Kinematic Synthesis of Mechanisms	3
Nano Materials and Technology	3	Measurement and Signal Processing	3
Nanomaterials	2	Mechanism Design	3
Physics of Semiconductor Device	3	Mechatronics	3
Physics of Semiconductor Device with Practices	3	Nontraditional Machining Processes	3
Processing technology and equipment for advanced semiconductor manufacturing	3	Precision Electro- mechanical System	3
Properties and Fabrication Techniques of Semiconductor Thin	3	Precision Machinery Dynamics and Control	3
Semiconductor Device Physics	3	Processing technology & equipment for advanced semiconductor manufacturing	3

Course Name	C	Course Name	C
Semiconductor Fabrication Technologies	3	Technology of Laser Material Processing	3
Semiconductor Fabrication Technology	3	Tool Introduction in Semiconductor	2
Semiconductor Materials	3	Vacuum Facilities	3
Semiconductor Materials and Devices	3	Vacuum System Theory and Practice	3
Semiconductor Molecular Materials and Fabrication Testing	2	Vacuum Technology	3
Semiconductor Process Integration	3		
Semiconductor Processing	3		
Silicon Nanometer Devices and Physics	3		
Special Topics in VLSI Processing Technology	3		
Special Topics on Advanced Materials Chemistry	3		
Surface Analysis for Materials	2		
Surface Analysis Techniques & Application	3		
Tool Introduction in Semiconductor	2		
Semiconductor Program: 20 credits			
Semiconductor Device and Design			
Course Name	C	Course Name	C
Analog Integrated Circuit Design	3	Introduction to VLSI Design	3
Applied Electronics	3	Machine Learning	3
Artificial Intelligence	3	Materials and Surface Analysis	3
Artificial Intelligence & Machine Learning	3	Optoelectronic Semiconductor Device Technology and Application	3
Artificial intelligent and machine learning	3	Physics of Semiconductor Device with Practices	3
Building Deep Learning Applications	3	Processing Technology and Equipment for Advanced Semiconductor Manufacturing	3
Characterization Methods for Semiconductor Materials	3	Properties and Fabrication Techniques of Semiconductor Thin	3
Characterization of Materials	3	Radio Frequency IC Design	3
Deep Learning and Internet of Things	3	RF IC Design	3
Deep Learning for Digital Image Analysis	3	Semiconductor Device and Physics	3
Design and Practice of Integrated Circuit Layout	3	Semiconductor Device Physics	3
Digital Logic Design	3	Semiconductor Fabrication Technologies	3
Electron Microscopy	3	Semiconductor Materials	3
Electronic Materials	3	Semiconductor Packaging Technology	3
Electronic Solid-State Device	3	Semiconductor Process Integration	3
Electronics	6	Semiconductor Processing	3
Fabrication of Photoelectronic Materials and Device	3	Soft Electronic Materials and Device Applications	3
Introduction of Equipment Components in Semiconductor	2	Special Topics in VLSI Processing Technology	3
Introduction to Semiconductor Device	3	Surface Analysis for Materials	2
Introduction to Semiconductor Manufacturing Technology	3	Surface Analysis Techniques and Application	3
Introduction to Semiconductor Processing	3	Tool Introduction in Semiconductor	2
Introduction to Solid State Physics	3	VLSI Design	3

Semiconductor Advanced Program: 45 credits		
Subject: TSMC Equipment Engineering		
Course Classification	Course Name	C
Semiconductor Processing	Semiconductor Processing	3
	Semiconductor Process Integration	3
	Introduction to Semiconductor Manufacturing Technology	3
	Fabrication of Photoelectronic Materials and Device	3
	Semiconductor Materials	3
	Special Topics in VLSI Processing Technology	3
	Electronic Solid-State Device	3
	Semiconductor Fabrication Technologies	3
Semiconductor Manufacturing Equipment and Technology	Processing Technology and Equipment for Advanced Semiconductor Manufacturing	3
Semiconductor Device	Introduction to Semiconductor Device	3
	Semiconductor Device Physics	3
	Optoelectronic Semiconductor Device Technology and Application	3
	Soft Electronic Materials and Device Applications	3
	Physics of Semiconductor Device with Practices	3
Electric Machinery and Circuit Theory	Circuit Theory	3
	Electrical Engineering Principles and Lab.	3
	Electrical Engineering	3
	Electric Machinery	3
	High-Frequency Electronic Circuit Lab.	3
Mechatronics and Automation Application	Precision Electro- mechanical System	3
	Micro- and Nano-Mechanical System	3
	Mechatronics	3
	Automatic Control	3
	Control System	3
	Applications of Industrial Automation Controller	3
	Automation Concept	3
	Introduction to Automatic System	3
	Applied Technology of Digital Signal Processor	3
	Computerized Motion Control	3
	Experiments and Design for Automatic Systems	3
	Precision Machinery Dynamics and Control	3
Fundamentals of Sensors	Fundamentals of Sensors	3
	Introduction to Sensor Application	3
	Fiber Optic Sensors	3
	The Integrated System Design of Multiple Precision Sensor	3
Vacuum Technology	Vacuum System Theory and Practice	3

Thermodynamics	Thermodynamics	3
	Thermal Engineering	3
	Chemical Engineering Thermodynamics	3
	Metallurgical Thermodynamics	3
	Advanced Metallurgical Thermodynamics	3
Mechanism Design and Processing	Mechanism Design	3
	Automatic Mechanism Design	3
	Nontraditional Machining Processes	3
	Technology of Laser Material Processing	3
Chemical Engineering	Chemistry	3
	Organic Chemistry	3
	Physical Chemistry	3
Fluid Mechanics	Fluid Mechanics	3
	Advanced Fluid Mechanics	3
Intelligent Manufacturing Technology	Intelligent Manufacturing Technology	3
	Internet of Things and Sensor Networks	3
	Smart Manufacturing and Lean Production	3
	Deep Learning and Internet of Things	3
Robotics and Automation Applications	Robotics and Automation Applications	3
	Industrial Robot	3
	Robotic Integrated Manufacturing	3
Measurement Principle	Measurement and Signal Processing	3
	Opto-electronic Methods in Precision Measurement	3
	Electron Microscopy	3
	Characterization Methods for Semiconductor Materials	3
	Radio Frequency Measurement Techniques	3
	RF Measurement Techniques	3
	Electro-Optical Measurement	3
Basic of Semiconductor Equipment	Tool Introduction in Semiconductor	2
	Introduction of Equipment Components in Semiconductor	2
	Semiconductor advanced equipment and key components	3
Materials Science	Introduction to Materials Science	3
	Special Topics of Materials Science and Engineering	3
	Material Science and Engineering	3
	Engineering Materials	3
	Ceramics Materials	3
	Mechanics of Materials	3
	Advanced Mechanics of Material	3
	Nano Materials and Technology	3
	Special Topics in Electronic Materials and Devices	3
	Electronic Materials	3
	Introduction to Nano-materials	3

	Thin Films Technology	3
	Physical Properties of Materials	3
	Characterization of Materials	3
	Dielectrical Materials	3
Electronics	Applied Electronics	3
	Electronics	3
Programming	Object-Oriented Programming	3
	Computer Programming Applications	3
	Computer Programming	2
	Programming and Lab	3
	Programming (*:1/2/3)	*
	Digital Image Processing	3
	Application and Design of Engineering Software	3
	Artificial Intelligent and Machine Learning	3
	Evolutionary Computing	3
	Microprocessor	3
	Application Programming for Mobile Devices	3
Statistics	Statistics	3
	Probability	3
	Engineering Statistics	3
	Statistical Analysis and Methods	3
Thin Film Engineering	Introduction to Thin Film Science and Engineering	3
	Properties and Fabrication Techniques of Semiconductor Thin	3
Inorganic Chemistry	Inorganic Chemistry	3
	Special Topics of Inorganic Chemistry	3

C: Credit

International Master Programme in Semiconductor Science and Technology
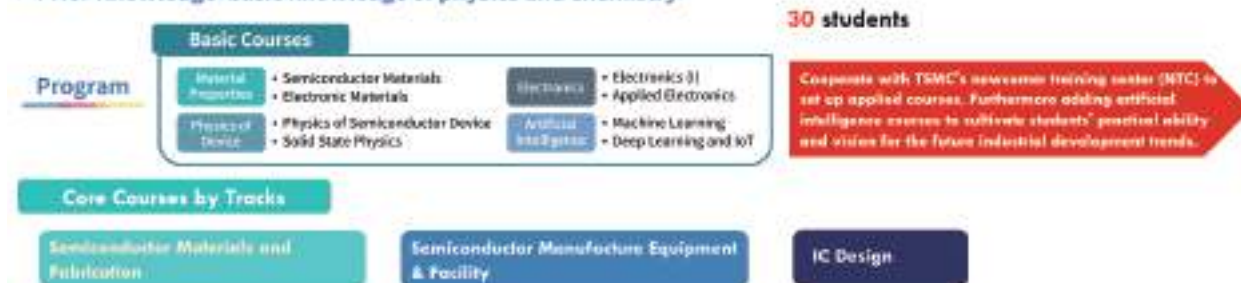
International Master Programme in Semiconductor Science and Technology (all English courses)			
Subject I: Semiconductor Materials and Fabrication			
Course Name	C	Course Name	C
Special Topics in Electronic Materials and Devices	3	Soft Electronic Materials and Device Applications	3
Introduction to Semiconductor Manufacturing Technology	3	Special Topics in VLSI Processing Technology	3
Characterization Methods for Semiconductor Materials	3	Silicon Nanometer Devices and Physics	3
Semiconductor Packaging Technology	3	Electronic Solid-State Device	3
Optoelectronic Semiconductor Device Technology and Application	3	Epitaxy Technology and Measurement	3
Subject II: Semiconductor Manufacture Equipment & Facility			
High-tech Factory System	3	Autonomous Mobile Robot	3
Clean Room Design	3	Digital Image Processing	3
Tool Introduction in Semiconductor	3	Introduction to Automatic System	3
Processing Technology and Equipment for Advanced Semiconductor Manufacturing	3	Semiconductor Advanced Equipment and Key Components	3
Introduction to Optical Electromechanical System and Manufacturing Technology	3	Advanced Robotics and Automation Applications	3
Subject III: IC Design			
VLSI Design	3	RF IC Design	3
Advanced Analog IC Design	3	Computer-Aided VLSI System Design and Practice	3
Mixed-Signal Integrated Circuit Design	3	VLSI Digital Signal Processing	3
Mixed-mode IC Design	3	Wireless Communication ICs	3
Low-Power Specialist RFIC and mmWave IC	3	Digital Multimedia IC Design	3
Note: Required courses: Master's Thesis (C: 6) and Engineering Seminar (C: 2)			

C: Credit

International Students Application Procedures

1

VERIFY THE STUDENT STATUS ELIGIBILITY

2

ENSURE THE AVAILABILITY OF ACADEMIC DEGREE PROGRAMS

3

PREPARE ALL DOCUMENTS

1. Diploma certificate
2. Transcripts
3. Curriculum vitae
4. Proof of language proficiency
5. Passport
6. Letter of recommendation
7. Statement of purpose*
8. Research plan*
9. Design portfolio*
10. Master thesis abstract*

4

SUBMITTED BY DEADLINE (oia.ntut.edu.tw)

5

RECEIVE A CONFIRMATION LETTER
*by email within 1 week

International Students Admission Timeline (Fall)

1

FEBRUARY 1
Online application system opens
(oia.ntut.edu.tw)

2

APRIL 30
Deadline for online application
(oia.ntut.edu.tw)

3

BEGINNING OF JUNE
Admission & scholarship results are announced

4

MIDDLE OF JUNE
Deadline for enrollment confirmation & dorm application

5

END OF JUNE
Letter of Acceptance (LoA) sent out

6

END OF JULY
Enrollment notice & guide sent out

7

SEPTEMBER
Enrollment and Orientation

8

SEPTEMBER
Class begins!

➢ Scholarship Information

	TAIPEI TECH SCHOLARSHIP		TAIWAN SCHOLARSHIP		
	Hua Yu	International Graduate Student	MOA	MOE	MOST
Target	Bachelor program	Master program	Doctoral program	Students from countries that have official diplomatic relations with Taiwan	Students from countries that don't have official diplomatic relations with Taiwan	Postgraduate students from countries that don't have official diplomatic relations with Taiwan
Reward	Tuition Fee 50% off	Tuition Waiver (2 years) + Monthly Stipend NT$ 6,000/ month (1 year)	Tuition Waiver (4 years) + Monthly Stipend NT$ 12,000/ month (4 years)	Tuition Fee 50% off + Monthly Stipend NT$ 30,000	Tuition Waiver + Monthly Stipend NT$ 15,000-20,000	Monthly Stipend NT$ 30,000
How to Apply	Directly submit application to NTUT (Taipei Tech)	Directly submit application to NTUT (Taipei Tech)	Directly submit application to NTUT (Taipei Tech)	Taipei Economic and Cultural Office (TECO) or Taipei Economic and Trade Office (TETO) in your country	Taipei Economic and Cultural Office (TECO) or Taipei Economic and Trade Office (TETO) in your country	Taipei Economic and Cultural Office (TECO) or Taipei Economic and Trade Office (TETO) in your country

■ National Taiwan University (NTU)

➢ **Why NTU?**

3 facts about National Taiwan University (NTU)

FIRST Institution of Higher Education
LARGEST University
MOST Comprehensive

Founded in 1928, NTU is the most prestigious university in Taiwan, and is among the top 100 universities in the world. Guided by independent thought and a pioneering spirit of enterprise, students at NTU become a part of the nation's richest center of learning and receive a diverse and superlative education. Our programmes are underpinned by cutting-edge research and vibrant academia-industry cooperation. Career guidance, numerous professional opportunities, and a vibrant entrepreneurship ecosystem enrich students' experience at NTU.

➢ **What semiconductor talents cultivation programme does NTU have?**

NTU Colleges and departments related to the semiconductor industry	
Graduate School of Advanced Technology **ntugsat@ntu.edu.tw**	
Integrated Circuits Design and Automation	https://gsat.ntu.edu.tw/en/home/
Devices, Materials, Hetero. Integration	https://gsat.ntu.edu.tw/en/home/
Nano-engineering and Nano-sciences	https://gsat.ntu.edu.tw/en/home/
College of Electrical Engineering & Computer Science **eecs@ntu.edu.tw**	
Department of Electrical Engineering	https://web.ee.ntu.edu.tw/eng/index.php
Institute of Photonics & Optoelectronics	https://gipo.ntu.edu.tw/?locale=en
Institute of Electronics Engineering	https://giee.ntu.edu.tw/en/

College of Engineering ntucoe@ntu.edu.tw	
Department of Mechanical Engineering	http://www.me.ntu.edu.tw/main.php?site_id=1
Department of Chemical Engineering	https://che.ntu.edu.tw/che/en/Default.html
Department of Materials Science & Engineering	http://www.mse.ntu.edu.tw/index.php?lang=en
Department of Engineering Science & Ocean Engineering	https://homepage.ntu.edu.tw/~ntuesoe/en/Default.html
Institute of Applied Mechanics	https://www.iam.ntu.edu.tw/en/
College of Sciences cos@ntu.edu.tw	
Department of Physics	https://www.phys.ntu.edu.tw/enphysics/Default.html
Department of Chemistry	https://www.ch.ntu.edu.tw/en/Default.html

NTU comprises 16 colleges, 56 departments, 139 graduate institutes, and over 100 research centers. Additionally, three new colleges have recently been added to the academic offerings. One of these is the Graduate School of Advanced Technology (GSAT), established in 2021 to support the development of key industries.

At GSAT, we are at the forefront of academic and intellectual exploration with four core fields and eight programmes: Integrated Circuit Design and Automation (MS, Ph.D.), Semiconductor Devices, Materials, and Hetero-integration (MS, Ph.D.), Nanoengineering and Nanoscience (MS, Ph.D.), and Precision Health and Intelligent Medicine (MS, Ph.D.)

4 facts about Graduate School of Advanced Technology (GSAT)

70 Jointly-appointed professors in Electrical Engineering & Computer Science, College of Engineering, and College of Science

- 19 MOST Research Excellence Awards
- 19 WTY Awards
- 8 NTU Teaching Excellence Awards (top 1%)
- 10 IEEE Fellow

R&D internships in international top-notch companies and institutions

- For students: They are able to enhance their employability, gain early experience in the workplace, shorten their career exploration, and expand their job opportunities.
- For GSAT: It is effective to utilize corporate resources effectively, expand practical teaching resources, and further build industry connections.
- For industries: They have more opportunities to cultivate the talents and recruit them before graduation.

Industry professionals to participate in co-teaching and guidance

- Hired Senior Director from MediaTek as a visiting professor.
- Jointly opened courses with Intel's senior principal engineers on integrated circuit system testing and Advanced IC Devices and Technologies.

English as a medium of instruction (EMI) courses

- To enhance the English proficiency and international perspectives of our faculty and students, we encourage professors to offer courses taught entirely in English.
- The delivery of course content, teacher-student interactions, learning and teaching materials, the exhibition of learning, and evaluation are all conducted in English

Application Timeline

> Scholarship Information

NTU Scholarships and Awards	- Outstanding International Graduate Student Scholarship - NTU Elite Doctoral Student Scholarship - NTU- Scholarship for Latin America and Caribbean Project - NTU- Scholarship for Central and Eastern European Countries - Scholarship for the British Virgin Islands - NTU Loyalty Award for Overseas Degree Students - NTU GSAT- Elite Ph.D. Student Scholarship - NTU GSAT- Elite MS Student Scholarship
Government Scholarships	- MOE Taiwan Scholarship - Elite Scholarship Program - Taiwan- Europe Semiconductor Scholarship Programme
More information	https://admissions.ntu.edu.tw/apply/scholarships/

Exchange programmes and summer camps

Exchange Programmes	- Available for students enrolled in a university with which NTU has a valid student exchange agreement - Please consult your home university for nomination procedures - For one semester or a full academic year
Visiting Programmes	- NTU credits available - For one semester or a full academic year
Research Visiting Programmes	- For students enrolled in overseas academic institutions - Conducting short-term research or internship at NTU - Programme duration ranging from 2 weeks to 6 months
NTU Plus Academy	- Short-term programmes - Chinese language and English conducted programmes - Various topic based
NTU GSAT Summer Camp	- Summer School on Semiconductor and Photonics - Cooperation with NCKU, NYCU, Eindhoven University of Technology, and other industrial partners

■ National Tsing Hua University (NTHU)

➤ Why NTHU?

National Tsing Hua University (NTHU) is a leading comprehensive research university with 12 colleges offering a full range of degree programmes in science, technology, engineering, humanities, social sciences, and management. NTHU is located nearby Hsinchu Science Park (the Silicon Valley of Taiwan) and also surrounded by world-class national laboratories and industries, such as TSRI and TSMC. NTHU provides a stimulating and nurturing environment so that our faculty can offer quality teaching and conduct innovative research. These can be reflected from our publication in the world's preeminent journals, awarded global patents and technology transfer cases. NTHU has nurtured many outstanding alumni, including three Nobel Prize winners and one mathematics Woolf Prize winner.

Students 18,000+

College 12

Sister School 300+

Department 58

Research Center 23

Cross-College Program 36
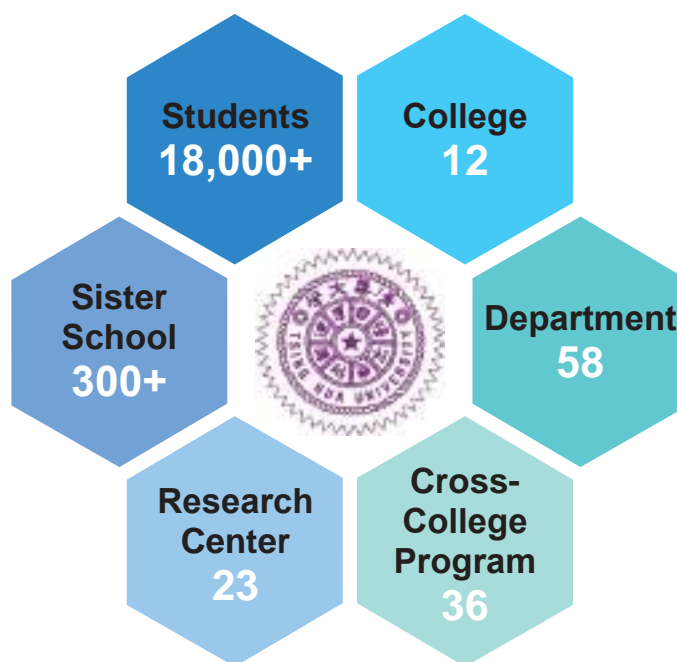
The College of Semiconductor Research (CoSR) at NTHU was established in August 2021. Our mission is to cultivate leaders for the semiconductor industry and academia, to educate them possessing deep domain knowledge in various semiconductor fields, interdisciplinary collaboration skills, and innovation capability. Focusing on interdisciplinary integration, CoSR is composed of four departments: Semiconductor Device, Semiconductor Design, Semiconductor Process, and Semiconductor Materials. CoSR has strong sponsorship and support from the

Ministry of Education and well-known international semiconductor companies such as TSMC, PSMC, TEL, GlobalWafers, Micron Technology, Unimicron, UMC, VIS, Novatek, Nanya Technology, MediaTek and FocalTech. We offer scholarships and grants for excellent students every academic year. We also invite renowned experts in the field to serve as industrial professors with the aim of bringing in knowledge of the most advanced technology and sharing their valuable experiences, which can help bridge the gap between university and industry.

NTHU builds a campus of industry-university cooperation and sustainable development.
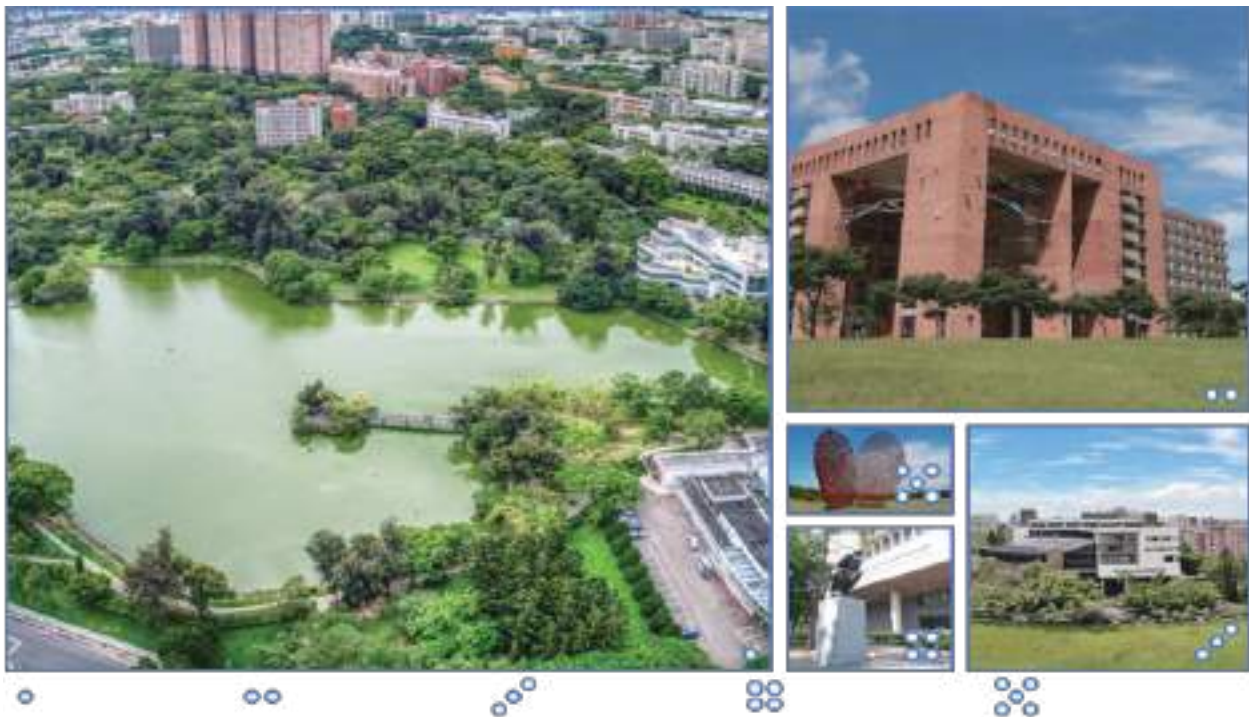
Our features in education for talents are as follows:

1. To provide a more professional and comprehensive study system, students are encouraged to seek advice from an academic professor and an industrial expert while doing a research.

2. Students can cultivate their professionality through professional courses provided in each department of semiconductor (Device, Design, Material and Process). Studying through these four departments, they are also trained to be a generalist of semiconductor technology.

3. To assist students in participating industry-university programme research, so that they can keep in touch with advanced research and development of semiconductor industry.

4. To provide "Leadership" and practical courses as well as internship opportunities with the aim of cultivating an innovist for the semiconductor industry.

5. Students are also encouraged to join the short to medium term of a research exchange programme at an international sister school of NTHU.

6. To support excellent students by specially providing scholarships and grants every academic year.
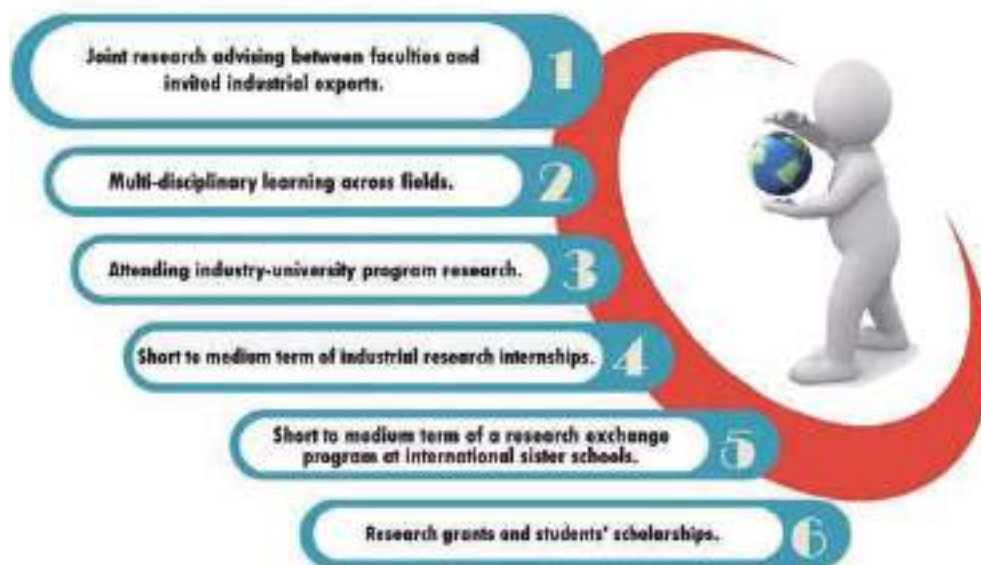
> ### What semiconductor talents cultivation programme does NTHU have?

The College of Semiconductor Research, NTHU offers a variety of professional courses in four departments: Semiconductor Device, Semiconductor Design, Semiconductor Materials and Semiconductor Process.

I. Features of Curriculum

- **Interdisciplinary Integration:** CoSR closely reviewed the syllabus of all semiconductor-related courses from other colleges such as Electrical Engineering and Computer Science, Computer Science, Material Science and Engineering, Physics, Chemistry, Chemical Engineering, and Power Mechanical Engineering, then integrated them into a strongly organized curriculum within the four departments.

- **Modularized Courses:** CoSR has further modularized courses into the four departments of semiconductors. With the cooperation of business partners, we jointly provide academic basic courses, practical enterprise courses, and multifaceted integration courses in each module.
- **Microcredit Courses:** CoSR also provide a host of diversified microcredit courses (between 0.5 and 3 credits) conducted by industrial experts. CoSR students will not only gain advanced technological knowledge but also strengthen their connection with the current industry so that they will be able to carry out more in-depth practice and industry-university programme research.
- **Corporate Internship Program:** Students are required to participate in corporate internships or short-term exchange programmes in academic research institutions. Students can either cooperate with domestic and/or international semiconductor companies recommended by their advisors, or participate in the short-term research exchange programme at an international sister school subsidized by the college.
- **Master Lectures:** CoSR invites renowned experts in the field of science and technology, to serve as industrial professors with the aim of bringing in knowledge of the most advanced technology and sharing their valuable experiences, which can help bridge the gap between university and industry.
- **Leadership:** CoSR aims to cultivate leadership for students to possess deep domain knowledge in a specific semiconductor field, inter-disciplinary collaboration skills, and innovative capability to create breakthroughs.

II. Introduction of Four Departments

- **Semiconductor Device Department:**

The Semiconductor Device Department provides the study of fundamental device physics, the research in advanced device technologies, and the learning of practical novel device design and characterization. This Department intends to cultivate semiconductor device talents for research and development in the academia and the industry in forward looking semiconductor technologies, such as 3D FinFET and GAA CMOS devices; SRAM, DRAM, Flash and the emerging RRAM, MRAM, FeRAM, PCRAM memories; pure Si as well as GaN and SiC compound power devices; MEMS device and system; Sensor and Optical devices. The device TCAD simulation, characterization, and reliability study are

embraced for more comprehensive study and characteristic evaluation. In addition, experimental courses in device design and manufacturing employ collaboration with world-class semiconductor companies to provide an up-to-date technology platform for hands-on learning of advanced devices and the exploration of leading-edge technology.

- **Semiconductor Design Department:**

Design Technology Institute promotes advanced researches in electronic circuit architecture and system that span the spectrum of analog/mixed-signal, RF and microwave, bio-medical, sensor, memory, digital system, and EDA. Faculties in the institute have demonstrated leadership in various domains including computing in memory, deep learning accelerator and system, hardware security, and quantum algorithm. Novel applications are also developed in close collaboration with leading industry experts. Exemplar systems includes highly-efficient DNN accelerator, bio-mimic fly drone, world-leading ReRAM-based computation engine, and dexterous human-like robotic ARM. Aspiring students are welcomed to join the institute for the highly active and dynamic research environment.

- **Semiconductor Material Department:**

To overcome the limitation of Moore's law, the development of novel semiconductor materials is essential. New functions of semiconductor devices rely heavily on the ultimate utilization of various materials' characteristics. The National Tsing Hua University has been recognized as one of the strongest institutes on materials research in the world. Our CoSR strongly links material experts on campus and from the semiconductor industry to provide students a solid background through courses and researches on semiconductor materials, including fundamental material cores, Si-based materials, compound semiconductors, dielectrics, metal contacts, polymers, microstructure and failure analysis, as well as computational materials. Through CoSR's training, students will be cultivated to be multi-disciplinary materials leaders.

- **Semiconductor Process Department:**

Semiconductor Manufacturing Process is a major area in which Taiwan excels over the rest of the world. A thorough understanding of the manufacturing process and the ability to harness the process and metrology equipment to its ultimate limit are extremely important. This CoSR plans to equip the students in process with the above capabilities in exploiting resolution enhancement techniques in immersion and EUV lithography, plasma and reactive ion etch, CVD, PVD, ALD, electroplating, CMP, ion implantation, diffusion, and oxidation, and deep learning using big-data coupled with tools such as design of experiment. Ability to solve problems and to invent new process or equipment are imbedded. Rich internship programmes with the collaboration companies are highly encouraged to participate for the students of the Process Department.

➢ **Scholarship Information**

NTHU Scholarships	CoSR Scholarship and Grant • Master NT$ 8,000 per month • Ph.D. NT$ 15,000 at the minimum per month * The above-mentioned scholarship doesn't include funding from an advisor professor, and may be adjusted depending on financial situation. * Tuition fee and credit fee waivers may be provided depending on academic performance. * Check Details: https://cosr.site.nthu.edu.tw/p/412-1536-20421.php?Lang=en
	NTHU International Student Scholarship • Doctoral students: NT$ 20,000~40,000 per month. • Master students: NT$ 5,000 per month • Bachelor students: NT$ 5,000 per month • Tuition and Credit fee waived * Check Details: https://oga.site.nthu.edu.tw/p/412-1524-18035.php?Lang=en

Government Scholarships	I. MOE Taiwan Scholarship
	    ● The Ministry of Education (MOE) Taiwan Scholarship Programme provides tuition and miscellaneous expenses of up to NT$ 40,000 each semester and a monthly living al-lowance of NT$ 15,000 or NT$ 20,000.
	II. Ministry of Foreign Affairs
	    ● NT$ 30,000 per month
	* Check Details: https://oga.site.nthu.edu.tw/p/412-1524-18035.php?Lang=en

	Elite Scholarship Program
	    ● Elite Scholarship for University Lectures from South and South East Asia
	    ● NT$ 25,000 per month
	* Check Details: https://oga.site.nthu.edu.tw/p/412-1524-18035.php?Lang=en

	Taiwan- Europe Semiconductor Scholarship Programme ● Up to NT$ 40,000 /monthly * Check Details: https://oga.site.nthu.edu.tw/p/412-1524-18035.php?Lang=en

● **How To Apply (For International Degree Students)**
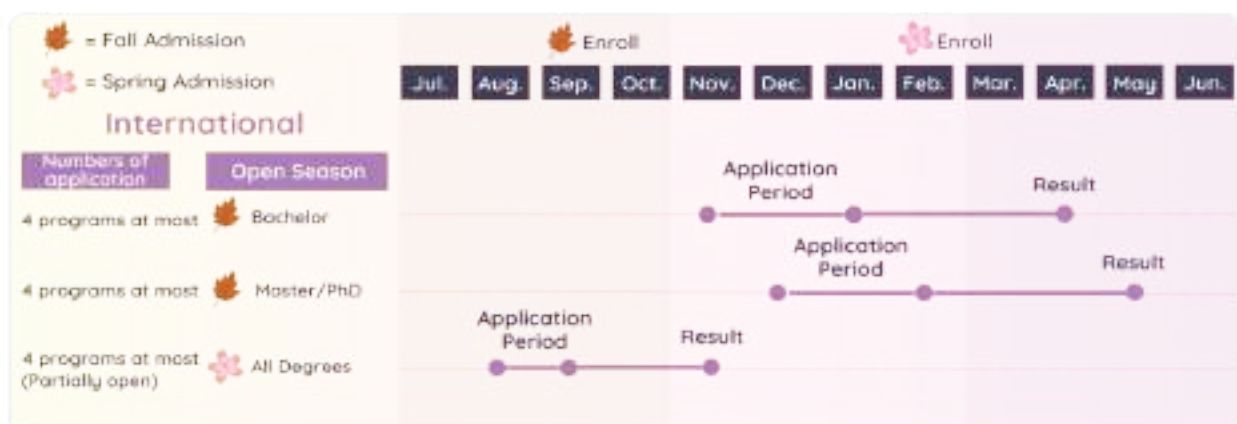
■ National Yang Ming Chiao Tung University (NYCU)

➢ Why NYCU?

National Yang Ming Chiao Tung University (NYCU) is a public research university in Taiwan. It was created in 2021 through the merger of National Yang-Ming University and National Chiao Tung University. At present, there are 19 colleges, 74 university/college level research centers, and 1 hospital.

NYCU is one of six national universities in research selected by the Ministry of Education. The university is also one of four universities selected by the Ministry of Education to participate in the Global Taiwan Program.

The College of Electrical and Computer Engineering of NYCU is the first college in Taiwan focusing on the fields of electrical engineering and computer science. Currently, the college has three departments and totals more than 150 full-time academic staff. The main research directions of the college are highlighted by the 14 major research groups in different fields. The college has established three main research centers concentrating on Nanoelectronics and Infotronic Systems, Information and Communications Technology, and Photonic and Optoelectronic Technology. Its stellar faculty includes Fellows of Academia Sinica, IEEE fellows, and distinguished engineering professors. The college also collaborates closely with the industry and initiates numerous joint research projects.

The alumni from the College of ECE have played a significant role within the global industries of information, integrated circuits, networks, and communications, from the Science Park in Hsinchu, Taiwan to Silicon Valley in California, USA. The chairmen of high-tech companies such as Trident Microsystem, Ven Global, Transmedia, and Clarent are all graduates from our

school. Their qualities of leadership, vision and creativity are guiding our new generations in continuing their legacy as leaders in a competitive field. This in turn fuels our ultimate goal of providing the best programme to our students.

Being the pioneer among Taiwan's institutes in fabricating the very first transistor dating back to 1965, NYCU ECE College envisions a future revolving around Si-vilization, emphasizing the role of semiconductor silicon in modern technology. The importance of semiconductor in today's world cannot be overstated, as it forms the foundation for various electronic devices and technologies that have become integral to our lives. Recently, NYCU has decided to set up a new semiconductor department and is recruiting faculty around the world. It shows a strong commitment to advancing semiconductor technology and preparing students for the challenges and opportunities of the future. By bringing together experts from around the world, NYCU ECE College will contribute to shaping the future of semiconductor technology and its applications in various domains.

★**World Rankings:**
- Research.com Best University Ranking - electrical & electronic (EE) 2023
  — # **1** in Taiwan, # **39** in the world
- ARWU Academic Ranking of World Universities 2022
    electrical & electronic engineering —# **1** in Taiwan
    telecommunication engineering —# **1** in Taiwan
- US News Best Global Universities Rankings
    electrical & electronic 2023—# **1** in Taiwan, # **193** in the world
- QS World University Rankings 2023— # **203** in the world

★**International Accreditation:**

➢ **What semiconductor talents cultivation programme does NYCU have?**

In NYCU, we have 3 major colleges for semiconductor education: College of Electrical and Computer Engineering (ECE), International College of Semiconductor Technology (ICST) and Industry Academia Innovation School (IAIS). Other colleges such as Engineering and Science also contain related departments and institutes for semiconductor research and development.

Those units integrate the outstanding faculty of research in the field of semiconductors and electronics from NYCU, and establish many research capabilities, including device physics, materials and components, IC and systems design, and EDA (electronic design automation). NYCU initiated Taiwan's first talents incubation and supported the birth of Taiwan Science Parks, we will continue to play this key role in international talents cultivation.
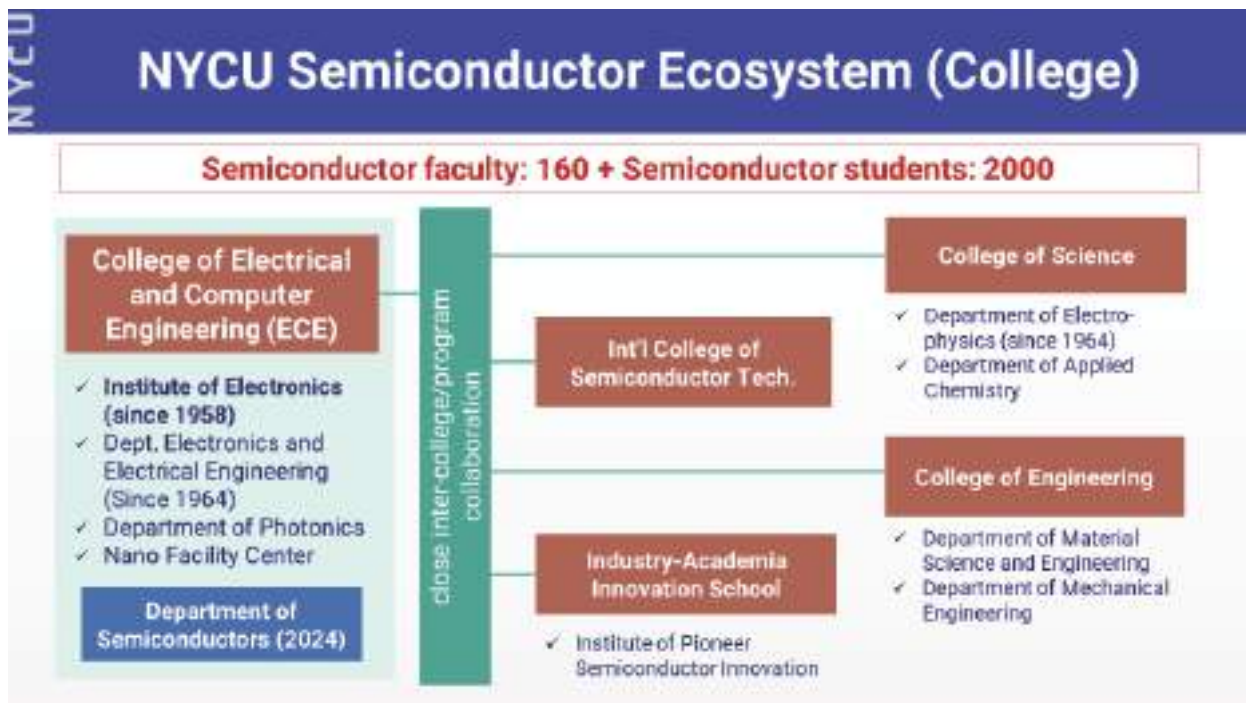
◆ Semiconductor faculty and students
   ✓ 200 full-time faculty members
   ✓ Around 1500 master students and 500 PhD students
◆ Semiconductor courses
   ✓ Semiconductor Device & Process: Intro. to Modern Physics, Semiconductor Physics, Semiconductor Engineering, Solid-state Physics, Intro. to Quantum Mechanism, Intro. to Material Science, etc. (60 courses)

- ✓ IC Design & EDA: Intro. to VLSI Design, Computer Organization, Digital Circuits & Systems, Intro. to Analog IC, Intro. to DSP, Intro. to EDA, Intro. to Algorithms, etc. (50 courses)
- ✓ Hands-on training through laboratory: Semiconductor Lab., Device & Circuit Characterization Lab., VLSI Lab., IC Design Lab., Analog IC Lab., RFIC Lab.
- ◆ Special Enterprise Training Program: TSMC Semiconductor Program, MTK IC Design Program

Honors of ECE@NYCU

Organizational Innovation
- 1994, the first Electrical Engineering & Computer Science (EECS) college in Taiwan
- 2006, the first Electrical & Computer Engineering (ECE) college in Taiwan

Best Alumni
- Far Eastern Economic Review's 2006 survey: the most alumni who have become general managers or board directors (65%) in the industry
- CHEERS magazine's 2002 survey: ECE@NYCU produces the most valuable and talented graduates
- CHEERS magazine's 2003 and 2006 surveys: highly recognized by the top 1000 companies, the university's students are the most favored by the technology manufacturing and service industries
- 2020 survey by 104 Job Bank: ECE@NYCU graduates are the most preferred by the semiconductor industry

Abundant Funding
- Highest number of approved projects and funding amount nationwide by Ministry of Education's Excellence Program
- An average of over 350 research projects each year, with a total amount exceeding 500 million NTD
- Major long-term industry-academia collaborations with TSMC, MediaTek, UMC, AU Optronics, Lite-On, Innolux, and ITRI, totally over 600 million NTD

Great Invention
- Production of Taiwan's first computer, television transmitter, laser, transistor, integrated circuit, semiconductor laboratory, and the world's first surface-emitting blue-violet laser diode
- Highest number of National Academy of Engineering members, Academia Sinica fellows, and IEEE fellows in the engineering field in Taiwan

International Exchange Student
- 356 partner universities from 48 countries around the world, including Nanyang Technological University, National University of Singapore, Singapore Management University and Singapore University of Technology and Design.
- Student exchange agreements with 203 partner universities, including Nanyang Technological University, National University of Singapore, Singapore Management University and Singapore University of Technology and Design.
- 1564 international exchange students have been hosted since 2016.
- Cultural Immersion Activities
- Free Chinese Language Courses

Application Information

International Degree-seeking Students

	Fall Semester	**Spring Semester**
Application Period	December 20 - March 15	August 10 – September 30
Announcement	Mid-May	Mid-November
Course Begins	Mid-September	Mid-February
Application	Please refer to the website for online application details. application details	

Inbound Exchange Students

	Fall Semester	**Spring Semester**
Nomination Deadline	March 30	September 30
Application Deadline	April 15	October 16
Course Begins	Mid-September	Mid-February
Application	Please refer to the website for online application details. application details	

➢ Scholarship Information

NYCU Scholarship:

- NYCU International Student Scholarship
  Award content: monthly stipend and tuition scholarship
  (1) Monthly stipend and tuition scholarships may be awarded separately or simultaneously.
  (2) Stipend are given monthly. The awards are as follows:
      i.   Undergraduate student: NT$ 5,000-21,000/month
      ii. Master's student: NT$ 7,000-25,000/month
      iii. PhD student: NT$ 15,000-30,000/month
  (3) Tuition scholarships are divided into two categories: (a) full waiving of tuition and credit fees, and (b) tuitions and credit fees charged
  according to the rates of local students.

- NYCU Elite Ph.D. Scholarship
  The award is for NT33,000 a month on top of a full waiver of tuition and credit fees.

Taiwan government Scholarship:

- MOE Taiwan Scholarship
      i.   Undergraduate student: NT$ 15,000/month
      ii. Master's student: NT$ 20,000/month
      iii. PhD student: NT$ 20,000/month

■ Lunghwa University of Science and Technology (LHU)

➢ Why LHU?

Lunghwa University of Science and Technology (LHU) is positioned as a university of applied science and technology that cultivates outstanding professionals for industry and provides innovative technical services. LHU currently has 3 colleges, 14 departments, 9 graduate master classes, 4 five-year junior colleges. LHU has also cooperated with the government to promote the collaboration featured the development of educational institutions, which focus on building a platform for the practice of diverse, intelligent technologies and strengthening cross-disciplinary technology integration to cultivate talent for the industry. Therefore, LHU overall has achieved outstanding performance among universities in Taiwan as well as received high praise from industry, government, and academia which are highlight below:

★ In the Media investigation of University running Excellence Performance Top 20, LHU has been consistently ranked in the Top 20 for six consecutive years and in 2023 is receiving the **second place** this year.

★ In the Media investigation that conducted by Cheers magazine Taiwan, in 2023 LHU achieved the **top position** among private universities of science and technology as the most favored by companies.

★ In 2023, LHU receives more than **NT$ 257 million** grants from the Ministry of Education and also ranks **first** in private university of science and technology in Northern Taiwan.

★ In 2022, the faculty carries out more than **NT$ 311 million** industry-academy cooperation project.

Location

Lunghwa is located in the hub where 5+2 key industry Zones where is the border between New Taipei City and Taoyuan City, right next to the Provincial Highway 1. It is also close to the Orange Line of Taipei MRT which is 0.8km to the Huilong Station, 15km to the Taipei Main Station, 30km to the Taoyuan International Airport.

Faculty

In academic year 2022, LHU has more than 279 full-time faculty members with over 80% Ph.D. degree, and over 93% are assistant professor and above. LHU has 3 colleges, which offering 14 undergraduates, 9 master's programme and 4 five-year junior colleges.
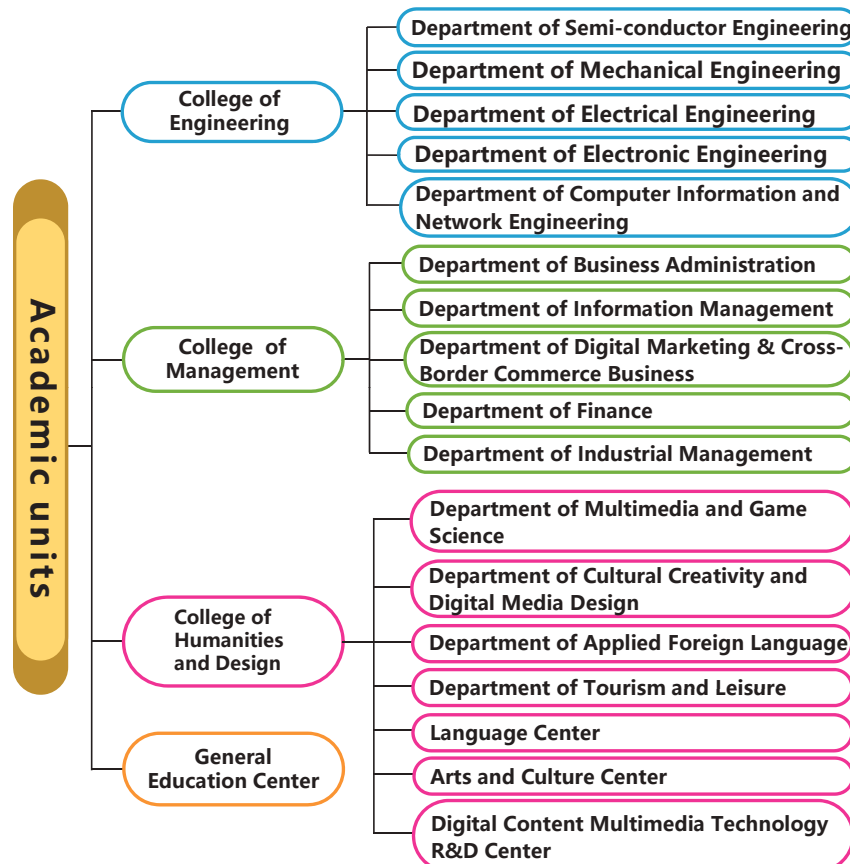
★ **College of Engineering:** key research areas including 5G, AIoT, high-speed transmission, smart manufacturing, power diode manufacturing.

★ **College of Management:** key research areas including e-enterprise-related management and technologies.

★ **College of Humanities and Design:** key research areas including VR/AR/MR, Animation and visual effects, Audio-visual media, Cultural creativity design, Leisure and travel, Digital tourism, Digital culture and education.

Student

In academic year 2022, LHU had over 11,000 students enrolled, which was **the largest private university of science and technology** in the northern Taiwan. More than 1,606 international students came from 15 countries, which also **ranked first** in the number of international students in private university of science and technology in Taiwan.

Special Practical Featured of LHU

LHU focuses on training industrial-required talent and shortening the gap between academia and industries. In academic year 2022, those centers had executed NT$ 38 million industry-academy cooperation project, 120 students won awards from professional contests, 540 students obtained professional certificates.

3D Digital Circuit Board Design & Intelligence Manufacturing Factory
(College of Engineering)

- The most complete and advanced PCB&SMT field for technical colleges
- With international giant YANGO Corporation to jointly develop the world's smallest 01005 SMT passive components
- Laser direct engraving PCB manufacturing process without photomask
- Cooperated with the Overseas Chinese Committee to establish the 「Thailand High-Tech Talent Training Base」

1.09 mm x 0.75 mm x 0.45 mm

Flip Chip

Substrate Thickness 0.3 mm
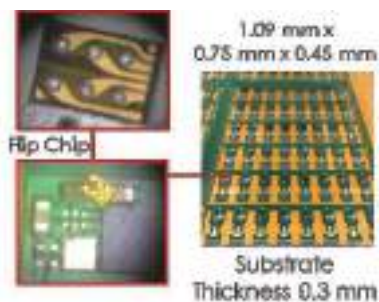
5G Communication Module Testing and Adjusting Service Training Center
(College of Engineering)

- Twenty vector network analyzers support teaching
- Ministry of Economic Affairs Antenna Design Engineer Competency Examination Room
- 50 GHz mmWave anechoic chamber for academia and industry
- EMC/EMI anechoic chamber donated by the industry for EMI verification
- Design, testing and adjusting services for millimeter-wave array antennas
- Successfully assisted industries in product development to expand overseas markets

High-Speed Transmission Interface Electronic Packaging Design and Testing Talent Training and Technology Center *(College of Engineering)*

- The center aim to cultivation talents in this field and was established in August, 2022, with a subsidy of NT$ 100 million from the Ministry of Education.
- To assist in the development of high-speed transmission interfaces, Guide R&D energy for small-batch production and testing and verification to improve the professionalism of teachers and students, encourage innovative practice, promote links with the real estate industry, and reduce the gap between learning and application.
- Open relevant high-speed training courses and the content of the course in line with future trends and related technologies and knowledge were added immediately, and it was revised and deepened at any time.

Deep Cultivation of High-end Processing Technology and Intelligent Machinery Production Line Practical Field *(College of Engineering)*

- The venue features 13 CNC vertical machining centers, 5 four-axis CNC machines, 5 five-axis CNC machines, 3 CNC turning and milling centers, and two high-end 3D printers. The site enables the cultivation of talents in precision finishing demanded by related industries and provides technical services for several precision-manufacturing enterprises.
- The site can also be equipped with existing four-axis engraving machines, precision dewaxing casting, and other equipment to extend precision processing technology to produce cultural and creative industry byproducts with high added values, such as glass and jewelry.
- Development of Robot Polishing and Milling technology: KUKA robot arms and milling equipment are donated by Shin-Nikko Co., Ltd., to assist the industry in planning the feasibility of robot processing, and the university conducts technology development to save costs and improve quality.

- Robot Welding Technology Development: In cooperation with Solomon Co., Ltd., the university develops the heat exchanger end plate-welding procedure to pass down to the company. This project introduces AI weld run quality inspection technology for deep learning training of defect images to quickly and accurately identify weld run defects. In addition, Octopuz simulation technology has been implemented to virtually design welding runs linked to CAD models of components to avoid arm collisions. We continue to promote the combination of electric welding machines and KUKA in the post-processor with intelligent manufacturing technology.

Connecting Asia Cross-domain Smart IoT Innovation Implementation Classroom in Silicon Valley *(College of Engineering)*

- Using industrial-grade AIoT equipments, with advanced smart sensors and IoT system integration equipment to cooperate with the industry for teaching.
- The department aims to cultivate cross-disciplinary and practical innovative talents for the smart Internet of Things industry.
- Related development characteristics
  (1) Building a development base for simulation factory and teaching fields in line with the industry.
  (2) Establishing an examination site for iPAS 'Internet of Things Application Engineer' and 'Information Security Engineer' competency certification with an approval by the Ministry of Economic Affairs.
  (3) Jointly developing the peptide synthesizer with an American company, CSBio CO., and providing important functions for the CDC of the United States during the period of the COVID epidemic.

Enterprise Resource Planning and Cloud Computing Center
(College of Management)

- Use the Workflow ERP system from Data Systems Consulting Company for teaching.
- The first university to use a cloud application virtualization teaching system; users can use various mobile devices, such as tablets, smart phones, and other platforms to make full use of various ERP related software provided by the center anytime and anywhere.Tutoring students for ERP Application Engineer's Certificate on financial module, distribution module, and production management module. The average pass rate of students is more than 80%.
- Hosting annual Top Cup National ERP System Implementation Skills Talent Competition.

A Specific-purposed Classroom for International Market Development
(College of Management)

- Equipped with four 65-inch interactive touch screens and two hanging screens for group discussion, live video broadcasting, and distance learning system.
- Adopting diversified space with a photography studio to develop multimedia business development, and cultivate international market development talents with the required abilities, such as project planning, global industry analysis, customer relationship management and cross-border e-commerce, etc.
- A trade ERP system is built to cultivate export business assistant's required abilities, such as quotation management, order management, and shipment management.

Meta Interactive Technology (VR/AR/MR) Service Center
(College of Humanities and Design)

- Providing a variety of the most advanced VR/AR/MR facilities, technology, and service.
- Digital Recording Lab features Hollywood production level cutting edge audio technology.
- Interactive Technology Laboratory is equipped with Omni VR treadmill equipment. Students has developed a number of award-winning game works presenting a more immersive VR interactive experience.
- XSENS motion capture system presents high-precision motion capture abilities, used for producing film, television, animation, and games.

Cultural, Creative Fashion Talent Cultivation and R&D Center
(College of Humanities and Design)

- Including jewelry precision processing workshops, enamel workshops, modeling workshops, polishing and grinding workshops, welding workshops, leather workshops, and textile workshops. In response to the current development trend of fashion boutiques and art markets, it is expected to cultivate "jewelry creation" and "fashion boutique" talents with multiple professional capabilities in art, design, and technology.
- Signed a MOU with the École Professionnelle des Arts Contemporains (EPAC) in Switzerland to launch a bilateral exchange program.

- Received the 「Fashion Category Gold Award」 at the DFA Asia's Most Influential Design Awards, as well as the 「Red Dot Design Award」 and the 「IF Design Talent Award」 in Germany.
- Key equipment includes: Micro pneumatic engraving machine, electronic spot welding machine, gold foil stamping machine, and others.

Furthermore, 「**Semiconductor Device Manufacturing Center**」 and 「**Power Semiconductor Module Packaging and Testing Factory**」 have been completed in the year-end 2022, and will be extended in the year-end 2023. Students can learn fully semiconductor practical skills in this center, including power diode manufacturing, package and testing.

➤ **What semiconductor talents cultivation programme does LHU have?**

A. Features for the Department of Semiconductor Engineering

The Department of Semiconductor Engineering of LHU is the first MOE-approved private university uses "semiconductor engineering" as the department name in Taiwan. The primary educational goal for the department is to "**cultivation students to develop a general understand of semiconductor devices and explore the principles and the operation mechanism of semiconductors especially to accomplish an individual device/IC.**" The department exhibits outstanding performance and holds several key advantages in pace with semiconductor trend. An outline of the course as described subsequently:

1. Mainly focus on nurturing students to grow the knowledge of the middle manufacturing processes in **semiconductor manufacturing** and develop the downstream sectors of the **semiconductor package/testing**. It is one of the few specialized universities in the country that focuses on cultivating talents for the semiconductor middle and downstream industries. Once students complete the course will become highly welcomed by companies, and will receive salary above the average.

2. The course content and curriculum design are easily understandable, covering foundational to core semiconductor skills which is emphasis on **practical and hands-on experience** in order to nurture students with compulsory professional knowledge. Moreover, the course also offers career-oriented programme that ensure students acquire skills and knowledge that align closely with the current needs of the industry.

3. In order to pace with the industry trend, the Department also established **state-of-the-art facilities** for students to be able to improve practical skills, such as semiconductor device manufacturing center, packaging assembly lines, testing centers, and semiconductor material analysis center.

4. The Department has established an 「**Industry-Academy and Talents Cultivation Alliance**」 with 14 globally known leading manufacturers. This will offer students to participate in different internship opportunity to work alongside experienced professionals to develop and reinforce their skills and qualities. The close collaboration between academics and practitioners will enable students to have smooth transition to the work sector.

5. The faculty members of the Department are Doctoral degree with wealth of industry experience. **The professors are specializing in semiconductor manufacturing, packaging, testing, and materials**. They also keen to participate in numerous industry-academy cooperation project, invention exhibitions or contests, of course earning multiple awards for their innovative contributions.

B. Curriculum Design

The department of Semiconductor Engineering offers 4-years Undergraduate and 2-years Master program. The curriculum design focuses on semiconductor devices/ICs manufacture/package/test, especially in the power semiconductor field.

- **4-years Undergraduate Programme** (does not contain Chinese Reading and Writing, Workplace English, General Courses and other elective courses)

| Step	Course	Credits	Hours
Fundamental Knowledge Cultivation (Required)	1. Introduction to Semiconductor Industry 2. Introduction to Electronic Materials 3. Digital Logic 4. The Practice of Electric Circuits* 5. The Practice of Electronics* 6. Introduction to VLSI Circuits 7. Semiconductor Equipment 8. Semiconductor Devices 9. Power Semiconductor Devices 10. Nano Devices and Materials 11. Vacuum Technology* 12. Materials Analysis Techniques*	28	648
Practical Skill Enhancement (Required)	**Semiconductor Manufacture Module** 1. Semiconductor Manufacturing Process 2. The Practice of Semiconductor Manufacturing Process (I)(II)* 3. Optoelectronic Semiconductor Device Manufacturing Process 4. Semiconductor Device Physics **Semiconductor Package/Test Module** 1. Semiconductor Packaging Materials 2. Electronic Packaging Technology 3. The Practice of Semiconductor Packaging and Testing (I)(II)* 4. Advanced Packaging Process	22	540
Theory and Practice Integration (Required)	**Capstone Courses** Special Topics (I)(II)(III)(IV)*	4	216
Practical Application (Elective)	**Off-Campus Internship** Summer Internship Senior-year Semester or Academic Year Internship	21	1,760

*: practical, hands-on training course

● **2-years Master Program**

Category	Course	Credits	Hours
Required	1. Elite Lecture 2. Master Thesis	10	--
Elective	1. Solid State Physics 2. Advanced Materials Science 3. Advanced Semiconductor Packaging 4. Special Discussion on Plasma Application Technology 5. Electronic Ceramics 6. Wide Bandgap Semiconductor Power Devices 7. Advanced Semiconductor Physics and Devices 8. Semiconductor-Based Sensor Technology 9. Silicon wafer semiconductor material technology 10. Special Discussion on Material Modification Technology 11. Advances in Instrumental Analysis 12. CMOS VLSI Design 13. The Practice of Semiconductor Manufacturing and packaging Process 14. Semiconductor Devices Modeling & Simulation 15. Electrical Measurement and Analysis of Semiconductor Devices 16. Power semiconductor devices 17. Opti-electronic Materials Practice	24	--

C. Facility

The department of Semiconductor Engineering has already established 4 important laboratories in the year-end 2022, and will be extended in the year-end 2023. Hence, LHU is the first university possesses capability to completely fabricate a semiconductor device in school, from blanket wafer, to a functional packaged device.
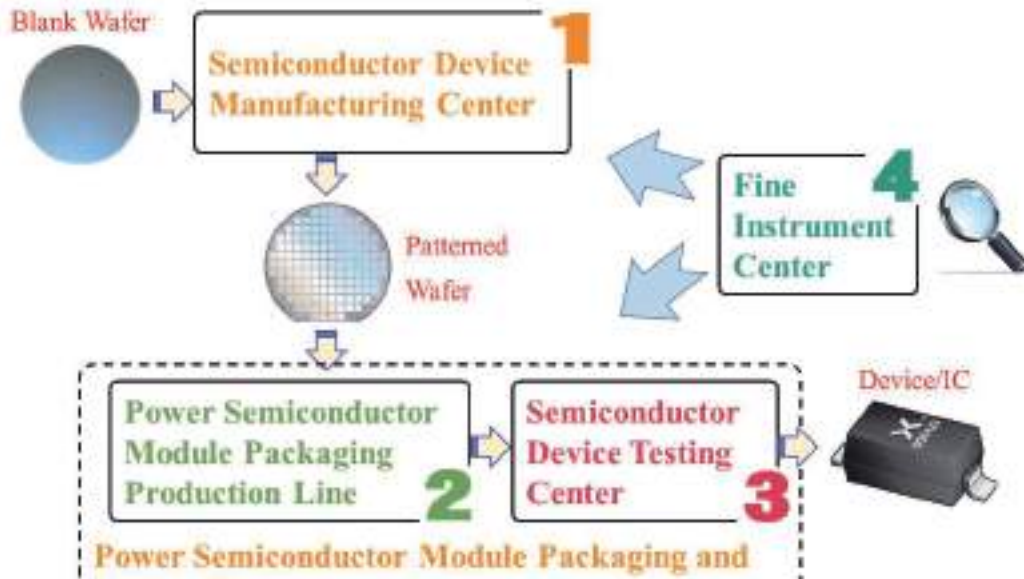
1. Semiconductor Device Manufacturing Center:

For semiconductor devices/ICs manufacturing, processes including thin film, lithography, etching, diffusion, oxidation…etc., which can fully support the requirement in semiconductor manufacturing, and make blank wafers become patterned wafers.

2. Power Semiconductor Module Packaging Production Line:

For semiconductor devices/ICs packaging, to protect the devices/ICs from any damage that could happen during transport, handling and storage, processes including wafer dicing, die bonding, wire binding, molding, trimming and forming…etc., which can make the patterned wafers become packaged devices.

3. Semiconductor Device Testing Center:

For wafer-level and IC-level semiconductor devices/ICs testing, to measure the electrical functions and appearance of the packaged devices, and classify the good or bad devices/ICs.

4. **Fine Instrument Center (Semiconductor Material Analysis Center):**

For various physical properties of the thin film or powder measuring and analyzing, especially during manufacturing and packaging.

➢ Scholarship Information

➢ For New International Students

	Elite Scholarship	Award scholarship
Bachelor Degree	Up to 100% Tuition Fee Waiver. The type and number of scholarships awarded will depend upon the qualifications of all applicants.	1st year: half tuition fee each semester.
Master Degree		X

➢ For International Students in Campus

	Elite Scholarship	Award scholarship
Bachelor Degree	Top 5%: 100% TFW Top 10%: 50% TFW Top 20%: 25% TFW	X
Master Degree	1st Rank: 100% TFW 2nd Rank: 50% TFW 3rd Rank: 25% TFW	X

➢ **Tuition Fee**

Bachelor Degree	College of Engineering: NT$ 51,308 College of Management: NT$ 44,630 College of Humanity and Design: NT$ 44,630
Master Degree	College of Engineering: NT$ 54,240 College of Management: NT$ 47,179 College of Management(IMBA): US$ 1,770

Notes:

(1) TFW: Tuition Fee Waiver

(2) Elite Scholarship: Undergraduate students cannot receive more than a total of 4-years-worth of scholarship awards. Graduate students may not receive more than a total of 2-years-worth of awards.

■ Minghsin University of Science and Technology (MUST)

➢ Why MUST?

Minghsin University of Science and Technology (MUST) locates in the heart of the high technology area of Taiwan, adjacent to the Hsinchu Science Park and near the Hsinchu Industrial Park, with numerous semiconductor companies in the surrounding area.

MUST has close cooperation with these companies through industry-academia partnerships and collaborations, aimed at enhancing the competitiveness of Taiwan's semiconductor industry and maintaining its position as a leader in the global supply chain. To attract and retain talented individuals, MUST has a comprehensive strategy for international student recruitment, including nurturing, retaining, and attracting talent. In the 2008-2022 academic years, we ranked first in the number of foreign degree-seeking students in Taiwan. In addition to cultivating local students, the university also supports the government's New Southbound Policy by offering international student internship programmes and actively recruiting foreign students from Southeast Asia, with around 1,300 international students enrolled.

Starting from the academic year 2021, the Ministry of Education of Taiwan has been promoting the "Establishment of Regional Industry Talent and Technology Cultivation Base Plan". This plan focuses on six core strategic industries and creates practical environments based on actual industry operations to cultivate professional technical talents in line with industry development.

The Ministry of Education approved the first batch of schools for this project, and MUST was granted a subsidy of NT$ 90 million, plus NT$ 30 million from the university, totaling NT$ 120 million to establish a "Semiconductor Industry Talent Cultivation Base" on campus, with the goal of cultivating practical talents such as semiconductor equipment development, maintenance, packaging, testing, quality management, and factory engineering required by the industry.

The semiconductor talent cultivation base is expected to be unveiled at the end of 2023. The 1st Floor is a production line for IC Packaging and Factory Service. This production line is also the package engineer test room and has many machines donated by companies. The 2nd Floor for IC Manufacturing. The yellow light zone is a clean room of class 1000. We have spin coater, developer and etching hood with production level. Others are thermal, thin film and measurement area. The 3rd Floor has labs for Inspection and analysis. There is a Lab to train the skill to assemble vacuum chamber and measure leakage, and the certificate of vacuum equipment engineer will be issued next year. The 4th Floor is the production line for Testing and Reliability. There is a Lab for semiconductor testing engineer examination. The first certificate of

semiconductor testing engineer will be issued next year.

We are also working with the Intelligent Electronics Institute of IDB to promote the "Semiconductor Packaging Engineer Competency Assessment". MUST has signed cooperation agreements with the major global leading packaging and testing companies. Powertech Technology (PTI) has donated several equipment for the assessment use, including wire bonding machines, die bonders, and cutting machines, all have been installed at our Semiconductor Talent Cultivation Base, and helped to establish the "Semiconductor Packaging Engineer Competency Assessment Center". The center offers subject and skill competency exams and issues Taiwan's first iPAS level semiconductor packaging engineer certificate. This certificate is issued by the Industrial Development Bureau and the Taiwan Electrical and Electronic Manufacturers' Association (TEEMA), making it a credible qualification.

The company recruited engineers and trained them with the assistance of MUST to obtain packaging engineer certification. This training-to-employment model can solve the problem of labor shortage, and industry, government, and academia work together to build a career dream of "semiconductor packaging and testing" for students.

We're currently actively promoting the Semiconductor Testing Engineer Certificate and the Vacuum Equipment Engineer Certificate. In the near future, we will continue offering engineer training courses and set up the test site for competency assessments, creating an integrated environment for education, training, and employment.

➢ What semiconductor talents cultivation programme does MUST have?

In line with the nation's key policies and focusing on the talent demand of the semiconductor industry, MUST integrated its relevant departments into Taiwan's first Semiconductor School in March 2021, includes the Department of Electrical Engineering, Department of Electronics Engineering, Department of Applied Materials Science and Technology, and Department of Semiconductor and Electro-Optical Technology. The four departments offer various types of programmes, including Undergraduate, Master program, In-Service Master program, and Continuing Education bachelor program. Additionally, MUST establishes the practical-oriented Ph.D. programme in Semiconductor Technology in March 2023, which is focuses primarily on the research and development applications of semiconductor. Now, Semiconductor school has more than 65 teachers and 2700 students. Most of our professors specialize in semiconductor materials, design, management, manufacturing, packaging and testing, etc

Fig.1 Semiconductor School of MUST
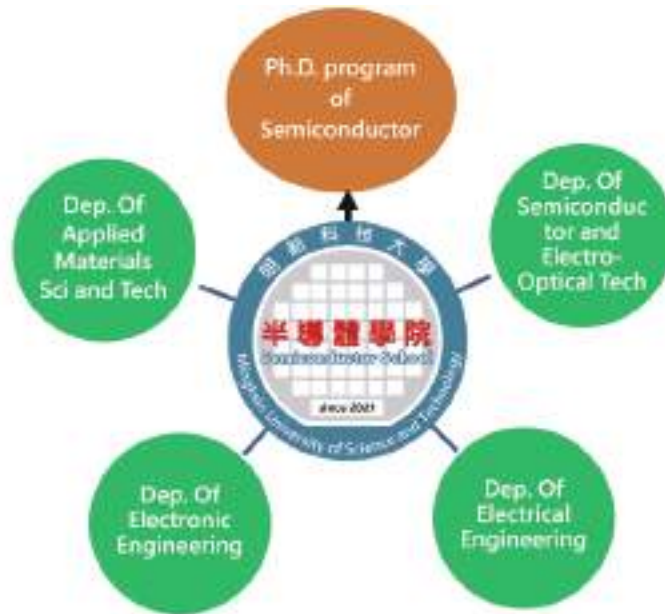
Which specializations are offered related to the semiconductor industry? (Ex. materials, design, management, manufacturing, packaging and testing, etc.)

Table Degrees of department

| Degrees name	Department name
PhD	Semiconductor Technology(C)
MS	Electrical Engineering(E,C) Electronic Engineering(C) Applied Materials Science and Technology(C) Semiconductor and Electro-Optical Technology(C) Industrial Engineering and Management(C)
BS	Electrical Engineering(E,C) Electronic Engineering(C) Applied Materials Science and Technology(C) Semiconductor and Electro-Optical Technology(C) Industrial Engineering and Management(C)
How many programmes or courses are offered in English? All Semiconductor related degree/non-degree programmes and courses can be delivered in English. For undergraduate courses, most courses are offered in Chinese.	

Many schools of other countries recommend students to study at MUST, that open a new situation of semiconductor talent exchange between Taiwan and international higher education Our Semiconductor school has attracted interest from New Southbound countries, as well as Kumamoto University in Japan and Doowon University in South Korea, among others. We have also established partnerships with universities in India, Malaysia, Australia, New Mexico, Utah, Montana in the United States, and others through dual degree programmes or the Taiwan Experience Education Programme (TEEP), recommending students to come to MUST to study, and initiating new avenues for exchanges of semiconductor talent between Taiwan and the international higher education community.

MUST signed a dual-degree MOU with Institute Sianran from Malaysia, with the presence of Mr. Phoong Jin Zhe, the Minister of Industrial Development and Entrepreneurship of Sabah, Malaysia, and the CEO of Kota Kinabalu Industrial Park. They also visited companies such as PTI and Kinsus to attract Taiwanese semiconductor companies to invest in Sabah. We have signed an MOU with Montana Tech, USA, to start a new phase of semiconductor talent exchange between Taiwan and the United States. A trilateral agreement for cross-border education cooperation with Western Sydney University of Australia and the University of Economics Ho Chi Minh City had been signed.

According to the "Semiconductor Industry and Talent White Paper" published by 104 Job Bank, graduates of MUST have the highest number of job invitations from companies, ranking first among all universities in Taiwan in terms of being most frequently invited by semiconductor companies for recruitment. Cheers Magazine also selected MUST as the number one favorite private technical and vocational university in northern Taiwan among university by enterprises. The 1111 Job Bank and GV Magazine also praised us for cultivating practical and applicable talents, which is widely welcomed by the industry. Taking advantage of the proximity to Hsinchu Science Park, MUST has found its own blue ocean and chosen to focus on downstream packaging and testing, which requires a large number of practical talents, rather than competing with the other research universities in IC design and manufacturing fields.

More about us ↓
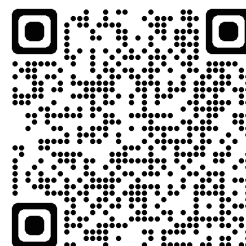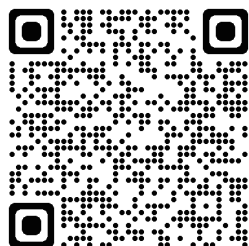
International Exchange Student

48 partner universities from **10** countries around the world, including Montana Technological University in U.S.A., Western Sydney University in Australia and Russian Technology University in Russia.

■ Student exchange with over 150 partner universities, including Montana Technological University in U.S.A., Western Sydney University in Australia and Russian Technology University in Russia.

■ Cooperate and explore with companies in the industry over the past decade.

■ Students can take professional courses from different colleges and select courses from the Semiconductor Program.

■ The Semiconductor Programme International Student Class will be established when the minimum number of student requirement is met.

★ Upon completion of the required courses and meeting credit requirements, students will receive IEET certification for the Semiconductor Program.

■ Research Projects

■ Cultural Immersion Activities

■ Chinese Language Courses

Application Information

Semester Period

Fall: Early April to end of June | Spring: Early October to end of November

✧ International Degree Students (Fall)

Item	Dates		
	1st Period	**2nd Period**	**3rd Period**
Apply online and submit required documents http://apply.must.edu.tw	Early April to April 30	Early May to May 31	Early June to June 30
Review of applications or enterance exams	May 1 to May 15	June 1 to June 15	July 1 to July 15
Admission results announcement.	Middle of May	Middle of June	Middle of July
Mailing of Admission letter			
Check-in and registration	Middle of September		
Application	Please refer to the website for online application details.		

✧ **International Degree Students (Spring)**

Item	Dates	
	1st Period	**2nd Period**
Apply online and submit required documents http://apply.must.edu.tw	Early October to October 31	Early November to November 30
Review of applications or enterance exams	November 1 to November 15	November 30 to December 15
Admission results announcement.	Middle of November	Middle of December
Mailing of Admission letter		
Check-in and registration	Middle of February	
Application	Please refer to the website for online application details.	

✧ **Overseas Chinese students**

	Apply directly to MUST	**Apply through Taiwan University Entrance Committee**
Application Period	**First Application Period:** October to December	Subject to announcement by Taiwan University Entrance Committee for Overseas Chinese Students
	Second Application Period: April to July	
Application	Please refer to the website of "Office of International Affairs-International Admissions Center" for online application details. https://admin.must.edu.tw/view/list.aspx?UnitID=1227&id=5448	

★ Overseas Chinese students who meet the qualification defined by the Overseas Community Affairs Council may apply through this channel. For relevant regulations, please refer to https://www.ocac.gov.tw/OCAC/

➤ Scholarship Information

The TEEP programme (Taiwan Experience Education Program) aims to invite outstanding international students with development potential from around the world (primarily the United States and Central and Eastern European countries, but not limited to these regions) to Taiwan for short-term internships, in order to gain an understanding of Taiwan's educational and academic resources and to encourage them to choose to study in Taiwan or to become part of Taiwan's workforce in the future. Domestic university teachers are invited to propose TEEP plans to the Ministry of Education, and the maximum length of stay is 6 months. The fields of study for the TEEP programme are primarily the Six core strategic industries (information and digital technology, Outstanding cybersecurity industry, precision health industry, green electricity and renewable energy industries, national defense and strategic industries, and strategic stockpile industries) and the 5+2 Industrial Innovation Plan (Smart Machinery, Asia Silicon Valley, Green energy, biomedicine, national defense, new agriculture industry, Circular economy). The maximum length of stay for TEEP is 6 months (the latest date of entry will be December 31, 2023).

The subsidy amount for this programme is calculated by multiplying the number of TEEP participants by NT$ 15,000 per month. If the programme involves cooperation with industry and a complete study and internship programme is planned, please include the additional funding application amount and purpose explanation in the summary of the programme proposal.

✧ Scholarships and grants for International Degree Students

	Full Tuition waiver scholarship	New Southbound scholarship	Award scholarship
Made at the time of application	✓	✗	✗
Department Handle	Office of International Affairs	Office of International Affairs	Admission Service Division
Must got	✗	✓	✓

Submit information	English-taught:
	  English Certification
	  TOEFL IBT 50 PBT 500
	  TOEIC550 IELTS 4.0
	
	Chinese-taught:
	  Chinese Certification
	  TOCFL Level4
	
	Master:
	  Average mark: 75
	  GPA: 3.0
	
	Bachelor:
	  Average mark: 70
	  GPA: 2.5
	
	Application Form
		Passport of
		1. Indonesia
		2. Singapore
		3. Malaysia
		4. Philippines
		5. Thailand
		6. Brunei
		7. Vietnam
		8. Myanmar
		9. Laos
		10. Cambodia
		11. India
		12. Pakistan
		13. Bangladesh
		14. Sri Lanka
		15. Nepal
		16. Bhutan
		17. New Zealand
		18. Australia
		19. Mongolia
			Graduate Certificate of MUST

Tuition for Program	Master:
	  Management 46,673 or 23,337
	  Engineering 53,571 or 26,786
	
	Bachelor:
	  Management 44,617 or 22,309
	  Engineering 51,210 or 25,605
		Master:
		  Management 36,000
		  Engineering 41,000
		
		Bachelor:
		  Management 35,000
		  Engineering 40,000
			Master:
			NT$ 25,000 / Sem
			
			Management
			46,673-25,000
			=21,673
			
			Engineering
			53,571-25,000
			=28,571

Scholarships and grants for Overseas Chinese students MUST and the Overseas Community Affairs Council Joint Scholarship Undergraduate Students: from NT$ **50,000** to NT$ **130,000**/year, maximum duration is **4** years.			

■ Exchange Programmes or Other Programmes

	Exchange Programme Partnership with Singaporean Universities					Other Programmes in Taiwanese Universities
	National University of Singapore (NUS)	Nanyang Technological University (NTU)	Singapore Management University (SMU)	Singapore University of Technology and Design (SUTD)	Other SG Colleges	
National Cheng Kung University (NCKU)	■	■	■	■		■ Summer Programme
National Sun Yat-Sen University (NSYSU)		■	■			■ Semiconductor Programme offered by TSMC
National Taipei University of Technology (NTUT)						■ New Southbound Policy Manderin and Semiconductor Short term study Programme
National Taiwan University (NTU)	■	■	■	■	■ NUS-Yale College	■ Summer Programme on Semiconductor and Photonics
National Tsing Hua University (NTHU)	■	■	■			
National Yang Ming Chiao Tung University (NYCU)	■	■	■	■		■ TSMC Semiconductor Program, MTK IC Design Program
Lunghwa University of Science and Technology						
Minghsin University of Science and Technology (MUST)						