

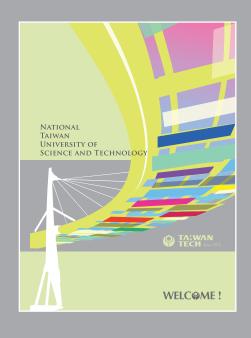


# NATIONAL TAIWAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

INTRODUCTION

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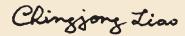
Dr. Ching-Jong Liao President, National Taiwan University of Science and Technology

# MESSAGE FROM THE PRESIDENT

From the beginning, Taiwan Tech has strived to combine theory and practice. Thus, our education has sought to provide our young people with the skills and expertise most needed by Taiwan's industries and enterprises, while our research has worked closely with industry to achieve urgently needed breakthroughs in design and technology.

Now, as we are moving onto the international stage as an applied research university, we are seeking to provide an environment for teaching and research that is proactive, collaborative, and innovative. We want not only to equip our students with skills and expertise but also to imbue them with a sense of social responsibility and an international outlook. We want to give our faculty the incentive and the support to try new things, new approaches to teaching, new kinds of interdisciplinary and international research cooperation. We want our students to have experience interacting with people from different cultural backgrounds and to enjoy the satisfaction of using their knowledge in community service before they graduate, as well as afterward in their careers.

Thus, our goal is to make Taiwan Tech "a great place to work and study, and a happy campus family." For it is such an environment that makes possible the personal and professional growth, the satisfaction of working together, and the creative space and stimulation that can produce the innovations in both theory and practice that the world's current challenges demand. We hope that both now and into the future, Taiwan Tech can be a place where faculty, staff, and students can achieve their dreams of a life and work that truly make a difference.



# NTUST INTRODUCTION

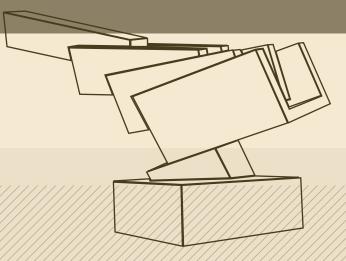
The National Taiwan University of Science and Technology was founded on August 1, 1974, as the National Taiwan Institute of Technology (NTIT). It was the first higher education institution of its kind within our nation's technical and vocational education system. By extending this system to the highest level, this new school was intended to meet the need created by our rapid economic and industrial development for highly trained bachelor's degree-level engineers and managers. In 1979 and 1982, NTIT added master's and doctoral programs, respectively.

On August 1, 1997, NTIT was upgraded to university status and changed its name to the "National Taiwan University of Science and Technology," also known as "Taiwan Tech." At that time, the school reorganized itself into the five colleges. After thirty years of growth and evolution, currently, Taiwan Tech is comprised of seven colleges, including engineering, electrical and computer engineering, management, design, liberal arts and social sciences, honors, and intellectual property studies.

Taiwan Tech has five campuses: the main Taipei campus and branch campuses at Tu-Cheng, Keelung, Gong-Guan and Chupei, with a combined total area of 29.44 hectares. The main campus, situated in a district of Taipei with convenient transportation and beautiful surroundings, covers an area of about 10 hectares. Current enrollment includes 5,605 undergraduates and 4,902 graduate students with 415 full-time faculties.

Our vision is to build Taiwan Tech into an international applied research university producing high-tech and management personnel with the ability to compete on a global level, thus supporting the future growth of our nation and society.

Our overall goals are to employ multifaceted excellence, innovative expertise, technology integration, and holistic education on the platforms of intelligent green building technology and creative design, while recruiting internationally-renowned professors to help us achieve cutting-edge breakthroughs in all aspects of our teaching and research. This will inspire the development of the entire university, neighboring academic and research institutions, and local industry in the upgrading of our national ability to compete on a global stage.



### ORGANIZATIONAL CHART

Office of Academic Affairs - Office of Research & Development Office of Student Affairs - Office of International Affairs Office of General Affairs - Teaching and Learning Center **Administrative** Secretariat - Academic Centers Units Accounting Office - Sporting Education Office Library - Personnel Office **Computer Center** - Office of Environmental Protection and Safety-Sanitation - Department of Mechanical Engineering Department of Materials Science & Engineering College of Engineering **Department of Construction Engineering Department of Chemical Engineering** - Graduate Institute of Automation & Control - Department of Electronic & Computer Engineering College of Electrical Department of Electrical Engineering Engineering and - Department of Computer Science & Information Engineering **Computer Science** Graduate Institute of Electro-Optical Engineering - Department of Industrial Management **Department of Business Administration Department of Information Management** School of Management - Graduate Institute of Management - Graduate Institute of Finance - MBA Program Academic **Programs** Department of Architecture College of Design - Department of Industrial & Commercial Design Vice President President - Department of Applied Foreign Languages - Graduate Institute of Digital Learning & Education College of Liberal Arts and Social Sciences - Department of Humanities & Social Sciences - Teacher Education Center - Inter-Disciplinary Bachelor's Program - Graduate Institute of Applied Science & Technology **Honors College** Graduate Institute of Biomedical Engineering Graduate Institute of Color & Illumination Technology - Bachelor Degree Program of Applied Science & Technology - Graduate Institute of Technology Management College of Intellectual **Property Studies** - Graduate Institute of Patent **Automation & Control Center** - Opto-Mechatronics Technology Center Taiwan Building Technology Center - Power Electronics Technology Center Color Technology Research Center - Materials Science & Technology Center Taiwan Information Security Center - Sustainable Energy Development Center Research Construction Safety and Health Center - Center for IoT Innovation Centers Chemical Mechanical Planarization Innovation Center - Commatrix Communication and Electromagnetic Technology Center - Nano Technology Center The Center for the Study of Lottery and Commercial Gaming - Intelligent Robot Center **Ecological and Hazard Mitgation Engineering Research Center** Intellectual Property & Business Center - General Education Center Comprehensive Center for Humanities & the Arts - Concern for Life Center Centers Taiwan Aborigine Center - E-Learning Research Center **Continuing Education Center** - Ventilation Technology Center

# ACADEMIC PROGRAMS: OVERVIEW

Taiwan Tech has thirteen departments in seven colleges, which contain twenty-three separate academic teaching units that accept students into undergraduate, master's, and doctoral programs. We have also designed multifaceted cross-disciplinary credit-hour study programs and degree programs as well as cross-disciplinary research centers in order to provide students multifaceted curricula, integrate the research capabilities of our different departments, and foster the development of personnel who can work across disciplines. Currently, we have 415 full-time faculty at the rank of assistant professor and above, 483 part-time faculty, and 250 professionals from commerce and industry who bring their real-world experience to our classrooms. Our student enrollment is 10,398, almost evenly divided between undergraduate and graduate students. Over 6% of our overall student body is comprised of international students from over 55 different countries, making our campus truly diverse and multicultural.





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NATIONAL TAIWAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

# COLLEGE OF ENGINEERING

http://www.ce-e.ntust.edu.tw

Department of Mechanical Engineering
Department of Materials Science and Engineering
Department of Construction Engineering
Department of Chemical Engineering
Graduate Institute of Automation and Control

The College of Engineering (CE) consists of four different departments that contain both graduate and undergraduate programs, which are Mechanical Engineering, Materials Science and Engineering, Construction Engineering, Chemical Engineering, CE Undergraduate Honors Program, and the Graduate Institute of Automation and Control. In addition, the CE has several on-going multi-disciplinary programs in order to stay prominent among the leading universities at home and abroad. The multi-disciplinary programs include Railway's Electro-Mechanical Systems Programs (both undergraduate and graduate levels), Railway Engineering Programs (both undergraduate and graduate levels), Micro-Fabrication Program (graduate level), the Automation & Control Program (undergraduate level), Environmental Engineering Program (undergraduate level), Cross-disciplinary Image Display Technology Programs (both undergraduate and graduate levels), Intelligent Vehicles Program (undergraduate level), Engineering Management Program (undergraduate level), Solar Optoelectronics Program (graduate level), Micro/Nano Mould Program (undergraduate level) and Program for Semiconductor Industry(graduate level). The College currently has 142 full-time faculty members, along with 323 doctoral students, 1,162 master's students, and 1,721 undergraduates. The ratio of undergraduate students to graduate students is about 1.16. For teaching and research, the College also provides several facilities geared towards advanced research, some of which are top-notch among the universities in Taiwan. These include field-emission dual-beam focused ion beam (FIB) and transmission electron microscope.

### Department of Mechanical Engineering

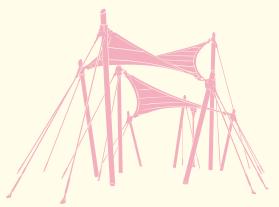
http://www.me.ntust.edu.tw/en/

The department of Mechanical Engineering was established in 1975 to provide undergraduate level education toward a bachelor degree in a four-year program, or in a two-year program for students with an associate degree. In 1979, post-graduate programs were offered for students pursuing Master degrees, and in 1986 the PhD program is offered. The department of Mechanical Engineering maintains high-quality faculty with full coverage of the related expertise. Currently there are 46 full-time faculty members, with 23 full professors (including 3 chair professors), 10 associate professors, and 13 assistant professors, all with PhD degrees. The faculty members are grouped into five divisions, namely, solid mechanics and design, manufacturing, thermal and fluidic sciences, systems and control, and material sciences.



The focus of teaching and research within the department is planned based on the manpower demand from the national key industries, including the Precision Mechanical Engineering, Semi-conductor and Opto-electronics, Flat Panel Display, and Bio-technology, and further branches into the specific directions such as mechanical design, precision manufacturing, thermalfluidic analyses, automation, and applied materials. The education features a balanced combination of theoretical fundamentals and application practices, and the students are trained with solid fundamental knowledge and in-depth engineering expertise. A project competition, integrated with the course "Mechanical System Design and Practice," is held each year where the students are grouped to design and build different types of robots to accomplish the designated tasks. This has been a featured event of the department where the students can apply the knowledge they learned to practical products. With the solid trainings received in the Mechanical Engineering department, the students are expected to become the elite engineers in the industry after they graduate. To enhance the connection between the training program and the industrial need, the "industry intern practice" courses are offered starting from 2010, where the students can take the intern jobs in the cooperating industries to apply their knowledge and skills to practical industrial problems. With the practical trainings, the students gain additional industrial experiences to strengthen their potential and competitiveness when they graduate, and thus contributing to the advancement of domestic mechanical engineering industry level. From the survey conducted by the "CommonWealth Magazine" within the top 1000 manufacturers in Taiwan, each year the graduates from the department of Mechanical Engineering ranked among the top four in the "most welcomed college graduates" section.

After more than thirty years of endeavor, the department of Mechanical Engineering has become an important incubator of high-level professionals for domestic mechanical engineering industries. Whether in the mechanical design, precision manufacturing, mechatronics, vehicle engineering, material science, and all kinds of industries, the alumni from NTUST-ME constantly offer high-quality, and high-performance service to the industries. In recent years, the department of Mechanical Engineering is actively promoting international collaborations to enhance the global vision and grasp of industrial trend of the students and the faculty members, with the goal to improve the overall international competitiveness.



### Department of Materials Science and Engineering

http://mse.ntust.edu.tw/home.php

Department of Materials Science and Engineering (MSE) at National Taiwan University of Science and Technology (NTUST), established in 1975, has a long and distinguished record of research in the materials filed. MSE started the master and PhD programs at 1979 and 1985, respectively.

MSE contains three research and teaching directions of organic materials, materials processing and inorganic materials. First, the topics of organic materials include functional materials, high performance materials, composites, membranes, synthesis of frontier materials, optoelectronic devices, medical materials, green materials and nano materials. Second, the subjects for materials processing are CAD/CAM systems, computer integration, automatic optical inspection and control system design. Third, the issues for inorganic materials involve metallic glasses, electronic ceramic materials, amorphous materials, metallic/ceramic gradient materials, semiconductors, solid oxide fuel cells, microsensors, light emitting materials, passive components and solar cells. In order to fulfill various research requirements, MSE offers state of the art facilities including transmission electron microscopy, X-ray diffraction, focused ion beam and so on.

In order to increase the competitiveness, MSE takes participation for globalization of research and teaching. Recently, MSE recruits international students, offers many English courses, handles international research projects and organizes international conferences and meetings.



# HANOSIO

# Department of Construction Engineering

http://www.ct.ntust.edu.tw/ct\_eng/

Established in 1975, the Department, as of 2013, has 35 full-time and 19 adjunct faculties, 85 doctoral students, 293 master's students, and 345 undergraduate students from Taiwan, as well as 3 undergraduate students, 28 master's students and 31 doctoral students from overseas. The total number of alumni is 7,100. There are five divisions in this department: 1) Construction Management; 2) Geotechnical Engineering; 3) Structural Engineering; 4) Construction Materials and 5) Information Technology. The aim of the Department is to offer students training in the professional skills needed in the fields of civil and construction engineering.

The four teaching goals of the Department are 1) Transmitting the professional knowledge and skills in civil and construction engineering; 2) Developing the ability to engage in innovative thinking for research and development; 3) Training the abilities and skills needed to implement, integrate and coordinate engineering practices and 4) Cultivating the virtues of engineering ethics, social responsibility, sustainability and global perspective.

As a part of our internationalization efforts, since 2005, the Department has recruited international graduate students and offered more than 62 percent of its graduate-level courses in English. This policy also provides the local Taiwanese students with more opportunities for global exposure and prepares them to excel in international competition. The department has also received accreditation of its engineering and technology education programs from the IEET (The institute of Engineering Education Taiwan), an international Full Signatory of the Washington Accord.

The Department is proud to provide students with a top-level education and well career preparation.





### Department of Chemical Engineering

http://www.ch-e.ntust.edu.tw

The Department of Chemical Engineering aims to train engineers with professional expertise, practical skills, positive working attitude, and dedication for sustainable development. Both fundamental knowledge as well as core chemical engineering aspects are included in the curriculum. As one of the most accomplished departments in research and development, the department is actively involved in research from National Science Council and private enterprises. Research of the department can be divided into nano and interfacial sciences, renewable energy development, molecular science and engineering, and green process development. This department offers international scholarship and all English graduate program for qualified foreign students. It has now become an integral and important part of our department, especially when it comes to research and international collaboration.

There are currently 32 full-time faculty members, including 20 professors, 6 associate professors, and 6 assistant professors. Total of 73 doctoral students, 237 master's students, and 398 undergraduates are enrolled in the department. Approximately 56% of doctoral students and 14% of master students are international ones, mostly from Indonesia, Vietnam, Ethiopia, and other countries, such as Russia, the Philippines, India, US, and Italy.



# Gaskentx

# Graduate Institute of Automation and Control

http://www.gsac.ntust.edu.tw/

Graduate Institute of Automation and Control (GIAC) was founded for cultivating the high-level professionals in response to the needs of Taiwan's automated manufacturing system development. GIAC initiated its master and PhD programs in 2003 and 2007 respectively with its aim of conducting interdisciplinary education and research by combining faculty in automation and control fields. Seven full time faculty members in combination with twenty joint-appointments from the departments of Mechanical Engineering, Chemical Engineering, Material Science and Engineering, and Electrical Engineering involve in teaching and research programs. There are currently over 100 graduate students enrolled in GIAC for his/her master's and doctoral degrees. GIAC, not only for local students, also accepts the application from international students to study in the perspective fields. Main areas of research include modern control theory, intelligent control, sensing, robotics, machine vision, image processing, automated optical inspection, opto-mechatronics, and green energy. Innovative projects in these fields run across the institute's faculty and students using the latest facilities in 11 research Labs including the Control System Simulation Lab, Automated Sensing and Control Lab, Opto-Mechatronics Lab, Intelligent Control & Optical Inspection Lab, System Dynamics & Control Lab, Intelligent Systems & Multimedia Application Lab, Advanced Optical System Lab, Chaotic System & Signal Processing Lab, CAD/CAM Lab, Integrated Automation & Control System Lab, and Optical Nano-Micro Sensor Lab. The cooperation between the industry and GIAC, or the international academic institutes and GIAC is proceeding and enriches GIAC contents in the future development. In addition, GIAC faculty members show the strong research performance with the average 4 journal or conference publications per faculty member per year. GIAC works to advance Taiwan government strategic mission and to define the technological research program of the 21st century in automation. GIAC produces graduates who are well-prepared to enter and assume leadership roles in the automation profession. GIAC provides research and intellectual resources to address problems facing the industry and the world.







NATIONAL TAIWAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

# COLLEGE OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

http://www.ceecs.ntust.edu.tw/home.php?Lang=en

Department of Electronic and Computer Engineering
Department of Electrical Engineering
Department of Computer Science and Information Engineering
Graduate Institute of Electro-Optical Engineering

The College of Electrical Engineering and Computer Science(CEECS) was established in August 1998 to educate future leaders in the rapidly evolving professions of electrical engineering, electronic engineering and computer science. Committed to becoming an internationally-recognized research institution, this College has been pursuing education through rigorous curricula and research on innovative technologies. With its excellent track record in research achievement, this College has established strong partnerships with industry, and is now extending its outreach to promote international cooperation in teaching and research. The academic performance of the CEECS is ranked in the top 5th among all the universities in Taiwan.

There are three departments (Electronic and computer Engineering, Electrical Engineering, Computer Science and Information Engineering) and one graduate institute (Electro-Optical Engineering), which all provide both doctoral and master's degree programs in the College. Currently, there are 116 full-time faculty, including 54 professors. Among these, there are 4 IEEE Fellows and 5 IET Fellows. The CEECS of NTUST is the 2nd largest college among the universities in Taiwan. There are 2,825 students, including 1,319 undergraduate students, 1,243 master's students, and 263 doctoral students.

The undergraduate and graduate programs are all accredited by the Institute of Engineering Education Taiwan (IEET) based on criteria that are substantially equivalent to those adopted by the Washington Accord (WA) signatories. As one of the most influential and recognized research organizations in northern Taiwan, the College also has six research centers:

- 1. Power and Energy System Research Center.
- 2. Power Electronics and Motor Control Research Center.
- 3. Center for Optoelectronics Science and Technology.
- 4. Telecommunication Technology Center.
- 5.Internet Technology Center.
- 6.SOC Research Center.

### Department of Electronic and Computer Engineering

http://ece.ntust.edu.tw/

The Department was established along with the University in 1974 with an aim to educate high-quality engineers and researchers for the rapidly evolving electronic and opto-electronic industries to provide cutting-edge technologies and innovations to the industry to bridge the gap between fundamental research and industrial applications. Currently, the 50 full-time faculty members, under three research groups, namely the Computer Engineering Group, the Electronic System Group, and the Opto-Electronics and Semiconductor Group, show a wide range of research interests in embedded systems, multimedia networking, VLSI design, analog IC design, power electronics, digital signal processing, RF systems, wireless communications, display and lighting technologies, optical communication, and semiconductor materials and devices. The Department offers undergraduate and graduate programs for master's and doctoral degrees, both of which are accredited by the Institute of Engineering Education in Taiwan, and has around 1000 students, half of whom are graduate students.









# Department of Electrical Engineering

http://www.ee.ntust.edu.tw/

The mission of this department is to produce future professional leaders, who have received solid technical training and possess innovative creativity. The current 44 full-time faculty members make up the following research divisions: Power and Energy, Power Electronics, Systems Engineering, Integrated Circuits and Systems, Computers and Networks, and Communication and Electromagnetic Engineering. Within this diverse and active research environment, the undergraduate programs emphasize a solid curriculum of both theory and practice, whereas the graduate programs stress research work, funded mostly by government and industry, to keep pace with the development of state-of-the-art technology. The department now has 95 doctoral students, 397 master's students and 448 undergraduate students.





# Department of Computer Science and Information Engineering

http://www.csie.ntust.edu.tw/

The Department of Computer Science and Information Engineering was established in 2001. With its initial faculty members drawn from the Departments of Electronic Engineering, Electrical Engineering, and Information Management, the Department has considerable scope and depth as well as potential for growth. We offer both master's and doctoral programs, in addition to four-year undergraduate programs. Strong research groups have been established in five major areas: Voice, video, and computer graphics technologies and multimedia applications; intelligent systems, machine learning, and robotics; parallel, real-time and embedded systems; cloud computing and computer security; wired and wireless computer networking. The emphasis of both research and teaching is on topics that integrate theoretical knowledge and practical experience in the latest international trends and state-of-the-art technologies. Our vision is to provide a stimulating environment that will enable our students to develop into the next generation of top researchers and engineers, contributing not only through academic research but also through solving real-life engineering problems for industry. The department currently has 22 full-time faculty members, along with doctoral students, master's students, and undergraduates.





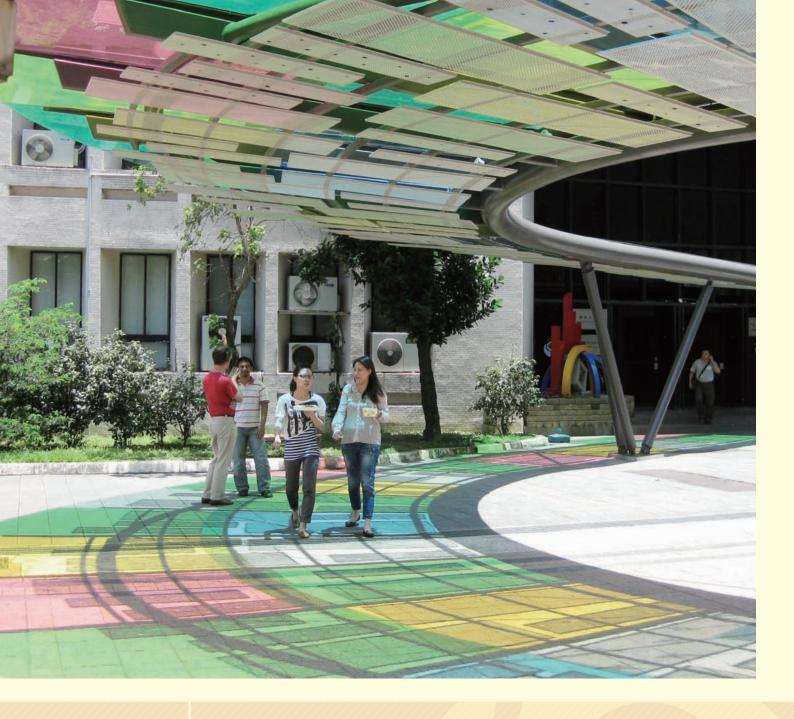
## Graduate Institute of Electro-Optical Engineering

http://eoe.ntust.edu.tw/

This Graduate Institute, established in 2006, seeks to integrate the teaching and research resources for electronics and photonics in Taiwan Tech. With its master's and doctoral programs, the Institute is committed to developing high-level engineers and researchers for the optoelectronics industry. Its current 8 full-time and 10 interdisciplinary faculty members along with well-equipped laboratories support cutting-edge research and teaching in the following major fields: display technology and micro-optics; optical communication; optoelectronic nano-technology; elctro-optical semiconductors; illumination; and bio-optoelectronics. In addition to basic research, the Institute also promotes joint research projects between academia and industry worldwide.







# NATIONAL TAIWAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

AN INTERNATIONAL APPLIED RESEARCH UNIVERSITY PRODUCING GLOBALLY COMPETITIVE HIGH-TECH AND MANAGEMENT PERSONNEL TO BUILD THE FUTURE OF OUR NATION AND SOCIETY











NATIONAL TAIWAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

### SCHOOL OF MANAGEMENT

http://www.em-e.ntust.edu.tw

Department of Industrial Management
Department of Business Administration
Department of Information Management
Graduate Institute of Management
Graduate Institute of Finance
MBA Program

#### **Our Vision**

Our vision is to be a leading school of management in Asia with students of diverse backgrounds in all stages of their professional careers.

### **Our Mission**

School of Management is committed to high quality education and applied research, emphasizing management skills, methods and processes, thereby expecting our graduates to have a global perspective, to be socially responsible, and to acquire experience in innovative applications with technology and industry focus.

Quality • Expertise • Perspective • Responsibility • Innovation

#### **Our Goals**

**Quality:** SOM continues to monitor and improve our students' learning environment and to upgrade the quality of our education and applied research. School-wide quality goals include problem solving, discipline-based knowledge, communication skills, information technology and developing an ethical mindset.

**Expertise:** SOM continues to promote case teaching through courses, case competitions and writing seminars with the assistance of The Case Teaching and Research Center (CTRC). The CTRC aims to collect and design more local cases with Asia business features for use in teaching and encourages students to actively participate in case-study contents to improve their management skills, methods and processes.

**Perspective:** The International Cooperation Center (ICC) was established to enhance the School's global outlook. Our activities include setting up an integrated English teaching platform, sponsoring student and faculty exchange activities, offering scholarships for foreign students, developing international dual-degree graduate programs, and strengthening relations with universities in mainland China and over the world.

**Responsibility:** SOM constantly improves students' attitude towards social responsibility, through incentives for course instructors that offer service learning modules, enriching the mentoring and counseling systems, and supporting student community activities. Out of classroom experiences such as community service, charity and funding raising events have enhanced students' social participation and taught students about giving back to the community.

**Innovation:** SOM has established The Service Innovation and Design Center (SID) to promote applied cutting-edge research and development. We enable our students to acquire more experience in technology and industry applications by advocating innovation and entrepreneurship degree programs. In addition, students are exposed to industry trends and needs through undergraduate final year projects and intensive in-class and off-campus practices, giving them an idea of what to expect upon graduation.

### Department of Industrial Management

http://www.im.ntust.edu.tw/home.php?Lang=en

The Department of Industrial Management(IM), founded in 1974 and running for over thirty nine years now, is one of the earliest departments established in the National Taiwan University of Science and Technology. The current programs of the IM department cover management concepts and strategies; and e-business solutions to transform traditional manufacturing industries into service-oriented organizations. The IM department has a stronger research potential compared to related departments of other colleges and universities with its ample number of research outputs. Most of the department's Ph.D. graduates teach Industrial Management or related courses in various academic institutions; that eventually, deepens its involvement in the Higher Education system.

The IM department started to recruit students for its master's degree program in 1979 for advanced studies in Industrial Management. The doctorate program began to accept students in 1983 with a curriculum emphasizing the fields of Production Management, Human Factors, Operations Research, and Information Science. To carry out continuing education, the IM department trains management people who have sufficient working experience in the field to pursue advanced studies. Thus, the IM department's EMBA program for part-time students was established in 1990. Presently, there are about 60 students in this program; who are not only learning the newest Industrial Management principles, theories, and applications from competent professors, but also exchanging ideas and experiences through group activities that in a way build up future business relationships. For internationalization, the IM department began to recruit foreign students in 2006.Most of graduate-level courses are lectured in English.



### Department of Business Administration

http://140.118.8.99/english/index en.htm

The Department of Business Administration was established in 1988 to offer a four-year undergraduate program for students holding vocational high school diplomas. Later on, a two-year program and graduate programs leading to a Master's or a Ph.D. degree were all added to complete the department's offerings.

The objective of the establishment of this department is to train and educate young talent in basic and advanced management skills under the guidance of national development policy and the vocational education system to fulfill the needs of business and industry. With regard to the main courses offered in this department, they are business strategy, human resources, industrial economics, finance, accounting, managerial quantitative methods, information management and a variety of other theoretical or practical management-related courses. Above all, we expect our graduates to be all-around managers.

# Department of Information Management http://www.cs.ntust.edu.tw/

Established in 1989, the department of information management aims at a balance between information technologies and management concepts in its teaching. From the standpoint of information technology, students are expected to become familiar with modern computer technologies from both theoretical and practical perspectives. As a result, courses including algorithms, operations research, information security, networking, database design, computer graphics, web services, and software engineering are offered. In the meanwhile, from a management point of view, students get hands-on contact with management techniques and concepts through the courses on production/operation management, financial management, personnel management, and marketing. Fundamental information technology skills and management knowledge are offered at the undergraduate level, as well as laboratory training courses and a mandatory one-year research project. These programs provide students the environment to practice and apply the knowledge they have learned.

We are committed to high quality education and applied research, emphasizing management skills, methods and processes, thereby expecting our graduates to have global perspective, to be socially responsible, and to acquire experience in innovative applications with technology and industry focus.





http://gm-e.ntust.edu.tw

The Graduate Institute of Management was founded in 1979. At present, it is responsible for the School of Management's Ph.D. in Management program (formerly the EDBA program); as well as the Executive Master of Business Administration (EMBA) program, which focuses on two different fields: "executive management and entrepreneurship" and "technology and service management." Our Ph.D. and EMBA programs are designed for experienced senior managers and offer innovative curricula arranged to accommodate the working professional. Each year, 10 students are accepted for the Ph.D. program and 30 students for each field of the EMBA program. These programs offer challenging classroom experiences, networking opportunities, a sense of community and world-class teaching from top-notch faculty who are excellent in their abilities and committed to their research and teaching. The program's flexible schedule enables students to balance the demands of work and family while pursuing a graduate degree.

### **Graduate Institute of Finance**

http://www.fn.ntust.edu.tw/English/e-index.htm

The Graduate Institute of Finance was established in 2002 offer a variety of finance-related programs that suit individual needs. Our goals are to prepare students for a wide range of careers both inside and outside the financial industry, including financial engineering and risk management, quantitative asset management, macroeconomic and financial forecasting, quantitative trading, and applied research.

#### **Learning Goals**

To play a role in helping the School of Management fulfill its mission and achieve its vision, the institute is committed to be a premier graduate institute of finance in the region and one of the best in the nation, with excellence and continuous improvement in finance education. The mission of the institute is to prepare students for successful careers by providing education of high quality through the efforts of caring, dedicated, and qualified faculty, to establish and foster relationships with the business and financial community, to promote the scholastic development of our faculty, and to provide advanced graduate education for students seeking academic or research careers. Regarding the mission statements, we have derived five learning goals:

- Critical and analytical thinking. Each student shall be able to demonstrate critical and analytical thinking skills when developing decisions in a variety of contexts within the financial services industry.
- Competence in specialization. Each student shall be able to demonstrate competence within his or her specialized field of study.
- Teamwork. Each student shall be able to gain experience working with other people and learn how to effectively communicate with team members to accomplish a stated objective.
- Quantitative analysis skill. Each student shall be able to acquire the statistical, mathematical and programming skills, and to apply those skills toward the solution of advanced problems in the field of finance.
- Ethical professional. Each student shall be able to think not only critically and analytically, but also historically and ethically.

To fulfill the above objectives and goals, our curriculum is organized to include requested courses, such as seminars and thesis, and specialized courses which are classified into four categories, financial engineering, corporate finance, investment, and quantitative analysis. The relationships among this institute's mission, learning goals and the curriculum are depicted in the following figure.



## **MBA Program**

http://mba-e.ntust.edu.tw/front/bin/home.phtml

Established in 2006, the MBA Program is committed to providing a cutting-edge graduate business education. This program is divided into two areas: Global Business Management (GBM) and Innovative Service and Design (ISD). GBM courses will be offered in English, and mainly consist of international students. ISD courses will be offered mostly in Chinese. The program draws on the specific strengths of each department and graduate institute in the School of Management to deliver a personalized international curriculum and seeks to foster excellence and innovation through a culturally diverse learning environment.

# Over **70** International Awards Won Since Year 2003 **Industrial Design** 11 BRAUN **Digital Animationa** annecy.org **Graphic Design**

NATIONAL TAIWAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

# College of Design

http://dcollege.ntust.edu.tw

Department of Architecture
Department of Industrial and Commercial Design

Beginning as the Graduate Program in Design in 1991 and formally established in 1997, the College of Design at the National Taiwan University of Science and Technology is regarded as the best in Taiwan. The college offers undergraduate, master's, and doctoral programs, through the Department of Architecture and Department of Industrial and Commercial Design.

In the College of Design, almost all of the faculty members have received Ph.D. degrees from abroad, including the U.S., Japan, the U.K., Germany, France, Switzerland, and Australia. Many faculty members also have years of practical experience and maintain ties to the professional community through consulting projects. Faculty members are active in research, receiving grants from Taiwan's National Science Council, other government agencies, private corporations and foundations. The strong faculty composition provides the students with a solid education in design fundamentals, theories, and methodologies, as well as computer-aided design technologies. In addition, taking advantage of the university's location in Taipei City, where over 90 percent of Taiwan's design firms are concentrated, the departments invite renowned architects and designers to be adjunct faculty members, allowing the students to gain first-hand knowledge from experts currently at work in the field.

Entrance to the College of Design's programs is very competitive, with an admission rate of only 5~10%. The students, who come from all over Taiwan, are talented and highly motivated. Since 2002, the college's students have won numerous design awards, including the iF Concept Award, iF Communication Design Award, iF Lebens(t)räume Award, Braun Prize, Reddot Award, Nagoya Design Award, International Design Competition Osaka, and D&AD Student Awards. In May 2011, International Forum Design published the iF Ranking of Universities, which ranked the College of Design first in the world, demonstrating the outstanding design capabilities of our students. Our faculty and student community provide an excellent learning environment for future architects and designers.

# Department of Architecture http://en.ad.ntust.edu.tw/

The Department of Architecture places high emphasis on both design and building technology. There are currently 18 full-time faculty members in the department, conducting design projects in urban, architectural, interior, and detailing scales design and research in computer application, green technology, safety for daily living, management, planning, history, and design theory. Each year, the undergraduate, master's, doctoral, and professional master's programs accept about 120 new students.

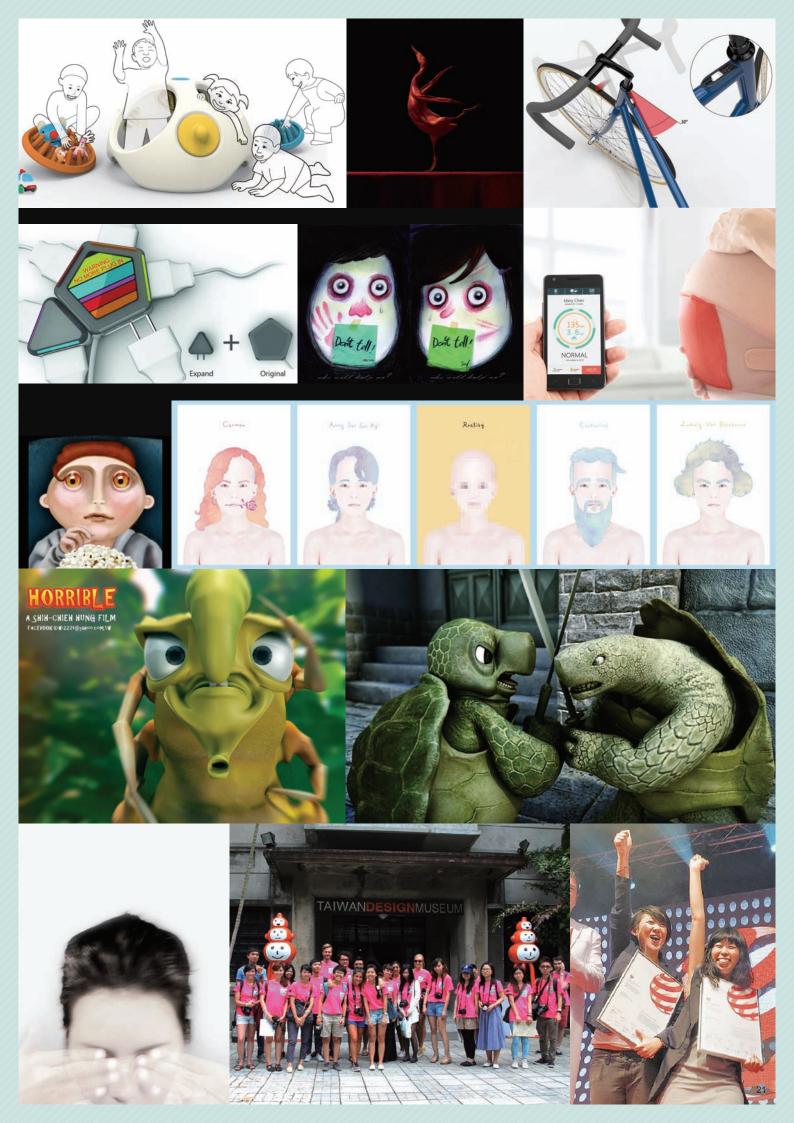
Through the hard work of both its faculty and students, the Department of Architecture has been gaining international recognition. Our students' projects have received awards at numerous national as well as international design competitions, such as the prestigious "iF AWARDs," "Red Dot," "SIGGRAPH Art gallery," etc.



# Department of Industrial and Commercial Design http://www.dt.ntust.edu.tw

The Department of Industrial and Commercial Design teaches students to gain a global perspective and develop local culture thinking in design theory and practice, with the aim to create a diverse learning environment. Our academic planning encourages research in innovative design such areas as Product Design (Industrial Design), Visual Marketing Design (Commercial Design), Interactive Digital Media Design (Information Design), and Design Management. All specialty courses are designed to integrate with faculty members and stride toward a diverse education with distinctive features. Ranked first among design school in Taiwan, NTUST also received international recognition from iF and Reddot Design Awards in 2011, placing first in the world among participating design universities. Students from DICD have been awarded numerously awards form international competitions that include SIGGRAPH, IDEA, iF, Reddot, D&AD for works in animation, product design, visual communication design, and interactive design.







# College of Liberal Arts and Social Sciences http://web.lass.ntust.edu.tw/

Department of Applied Foreign Languages Graduate Institute of Digital Learning and Education Department of Humanities and Social Sciences Teacher Education Center

The College of Liberal Arts and Social Sciences was established on August 1, 1998. One aspect of our educational and research mission is to make our university an institution that provides an international, multicultural, and many faceted environments for study in the humanities and social sciences, in order to develop our students' potential, broaden their outlook on the world, cultivate sound values, and encourage their concern for society and their fellow human beings. A second aspect of our mission is to develop the special features of each field in the humanities and social sciences and bring out their connections with the various fields of science and technology, in order to carry out cross-disciplinary research and realize a true melding of science and the humanities, so that our university's graduates will be people possessing both professional expertise and emotional maturity.

At present our college consists of the graduate and undergraduate programs of the Department of Applied Foreign Languages, the Graduate Institute of Digital Learing and Education, the Department of Humanities and Social Sciences, and the Teacher Education Center. To increase the competitiveness of our graduates in the job market, our college puts special emphasis on strengthening students' language and communications skills, their understanding of professional ethics, and their ability to lead and think independently. We also seek to develop our students' emotional and creative capacities through concerts, literary readings, special speakers, debates, and fine arts activities. In the area of research, our college publishes two academic journals, Journal of Liberal Arts and Social Sciences and Studies in English Language and Literature. We also strongly encourage our faculty to publish articles and apply for research grants from the National Science Council and the Ministry of Education, especially in areas of cross-disciplinary research that bring together the humanities and science and technology.

In response to government policies and the needs of society, our college will continue to establish new departments and graduate programs. In teaching, we seek to expand our students' development in the humanities and constantly improve the classroom effectiveness of our faculty, in order to provide a well-rounded education. In research, in addition to upgrading the research environment and resources that we provide for our faculty, we hope to enhance the special features of each department. In service, we plan to provide extension education to the community as well as opportunities for cooperation with industry. Our college currently has 32 full-time faculty members and six administrative staff members.

### Department of Applied Foreign Languages

http://www.afl.ntust.edu.tw/english

A Brief Introduction: The NTUST Department of Applied Foreign Languages (AFL), established in 1998, currently offers five degree programs—a four-year bachelor's degree program, a two-year bachelor's degree program (open to students holding an A.A., or equivalent), an evening division bachelor's degree program for working professionals, and both daytime and evening master's degree programs. The department also encourages students to take advantage of its special study opportunities, including study abroad, teacher education certification, and inter-university elective courses offered in cooperation with National Taiwan Normal University. Students admitted to the university can also qualify for a double-degree or a double-major program.



#### Objectives:

- 1. Cultivating specialists in English teaching:
- Graduates would be able to work in TESL/TEFL related fields through balanced training in pedagogical theory and practice.
- 2. Cultivating specialists in translation & interpretation:
  - Graduates would be able to work in translation & interpretation related fields through cultivation of competence in translation and interpretation.
- 3. Cultivating specialists in ESP:
  - Graduates would be able to work in ESP related fields through cultivation of competence in professional communication.

### Curriculum:

The basic undergraduate curriculum comprises intensive level-by-level instruction in listening comprehension, speaking and oral communication, reading, writing, and translation and interpretation. Students are also offered courses in Western literature, culture, linguistics, and teaching theory. Professionally oriented courses cover various fields as well, including English teaching, translation/interpretation, and oral presentation. Elective courses in a second foreign language include Japanese, German, French, and Spanish.

Many of the department's skills courses are taught in small classes, of about 15-20 students. Extracurricular English activities are also an important feature of the department, providing students further opportunities to strengthen their language skills as well as their organizational and leadership abilities.

#### Facilities & Equipment:

The department has a fully-computerized multimedia language lab, a specialized interpretation conference room, and an English Teaching and Learning Resources Center. The AFL Department also offers a number of language-related multi-media training tools and software that are readily available for students to help them improve their overall English proficiency. The department draws as well on the university's general facilities, which include multi-media equipment and internet access in nearly all classrooms and specially equipped auditoriums.

### Opportunities for Graduates:

Many graduates of the department have gone on to postgraduate studies at schools in Taiwan or abroad, and our students are able to pursue their interests in a wide range of fields, in their studies as well as in their careers, including English teaching, education, translation, publishing, journalism, tourism, and business administration.

## Graduate Institute of Digital Learning and Education

http://www.gidle.ntust.edu.tw

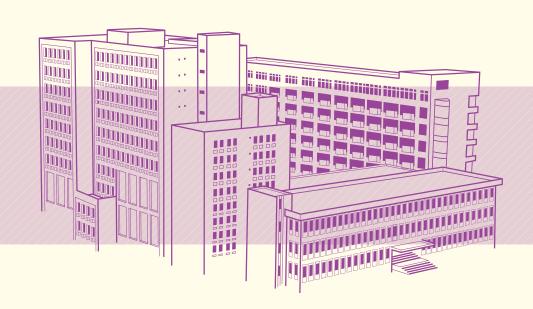
Brief Introduction: This Institute was established in 2000 as the Graduate School of Technological and Vocational Education, and was renamed as the Graduate Institute of Digital Learning and Education in 2010. It currently has 10 full-time faculty members and 77 graduate students. The Institute has been providing training for pre- and in-service teachers in primary and secondary education. Research of the Institude Centered around relationship between education and technology and is currently conducting a range of interdisciplinary research in related topics, including curriculum and instruction, science education, online learning and ubiquitous learning. Most of our faculty also serve in the Teacher Education Center of the National Taiwan University of Science and Technology (NTUST). The Institute is ranked among the top three graduate institutes of education in Taiwan, and the Teacher Education Center has ranked as one of the top national teacher educational centers since 2004.

Curriculum Design: We integrate theory and practice in our courses. In additional to methodology, the five main course categories are:

- 1. Digital Content and System Design
- 2. E-learning Psychology and Strategies
- 3. Science and Information Education
- 4. Technology- enhanced Learning







## Department of Humanities and Social Sciences

http://www.lass.ntust.edu.tw/doh/en

The Department of Humanities and Social Sciences is the result of the merger in February 2010 of the Department of Humanities and the Department of General Education. Its major duty is to design the curriculum for the entire university in such areas of study as Chinese, History, and General Education. General Education courses are grouped into 3 broad areas: Humanities, Social Sciences, and Natural Sciences. The major subject areas covered include law for science and technology, sociology, psychology, appreciation of music and art, and philosophy.

Teaching activities are carefully planned to help the students grow in wisdom and to develop good character, while also cultivating in students through the humanistic disciplines the abilities of critical thinking and sound judgment, self-awareness, respect for differences, tolerance, and diverse values. Language ability, interpersonal relationships, and professional ethics are all considered to be of the utmost importance in providing technology students a holistic education.

The department currently has seven full-time faculty members, including two full professors, four associate professors, and one assistant professor.





### Teacher Education Center

http://www.tec.ntust.edu.tw/

The teacher education program for secondary schools at NTUST was established in 1995. Every year about 90 students enroll in this program. Students who fulfill the requirements for pre-service training will be qualified to take the national teacher certification exam in order to teach in junior or senior high schools and vocational senior high schools.

For the pre-service teacher training, students have to complete 26 course credits plus a half-year full-time internship. The courses in the program include educational psychology, introduction to education, curriculum design, guidance theories and practices, educational testing and measurement, subject-matter teaching methods and materials, educational media, education law, education sociology, developmental psychology, class management, philosophy of education, gender education, introduction to special education, creative teaching strategies, and so on.

The Teacher Education Center at NTUST has been evaluated and ranked by the Ministry of Education as one of the nation's top teacher education centers since 2008.







NATIONAL
TAIWAN
UNIVERSITY OF
SCIENCE AND
TECHNOLOGY

# Honors College

http://honor.ntust.edu.tw/

Inter-Disciplinary Bachelor's Program
Graduate Institute of Applied Science and Technology
Graduate Institute of Biomedical Engineering
Graduate Institute of Color and Illumination Technology
Bachelor Degree Program of Applied Science and Technology

In order to adapt to the global and interdisciplinary integration brought about by the rapid evolution of technology, the Ministry of Education gave its approval to the establishment of the "Honors College" at Taiwan Tech in February 2008. Currently, the Honors College includes several undergraduate and graduate programs. In 2008, the Graduate Institute of Applied Science and Technology (originally called the "Graduate Institute of Engineering" and renamed in August 2011) and the University Interdisciplinary Bachelor's Program were made part of the Honors College. In 2009, the" Graduate Institute of Biomedical Engineering" was established, the "Graduate Institute of Color and Illumination Technology" was launched in 2011, and the "Bachelor Degree Program of Applied Science and Technology" was established in 2013 respectively for the enhancement of teaching and research diversity.

Base on the approach applied by many well-known universities in the late twentieth century, the Honors College implements an advanced concept of "later decision on a student's major department" for college students. Moreover, in order to recruit excellent scholars and upgrade the level of our research, the university invites internationally renowned scholars as the chair professors who are given full support to build up their own research teams.

### Inter-Disciplinary Bachelor's Program

http://jc.ntust.edu.tw/

The Inter-Disciplinary Bachelor's Program (IDBP) of the National Taiwan University of Science and Technology (NTUST) was established in 2006. It is also referred to as "Jing Cheng Department", which belongs to the "Honors College" of NTUST. The main purpose of this program is to cultivate multi-intelligence students who are from a great diversity of backgrounds as the following:

- General high school students with outstanding academic performance.
- General high school students with significant performance on sports.
- Vocational high school students with an exceptional skill.
- Vocational high school students with outstanding academic and skillful performance.

In addition to the diverse backgrounds of the students, the distinguishing feature of IDBP is allowing its students to choose their major in the 4th semester since the entrance into NTUST. An IDBP student can explore himself/herself and figure out his/her own unique specialty during the first two years of the college life. To assist students in planning their professional career and solving the problems encountered at NTUST, at least a professor is designated as the mentor to each 20 IDBP students. Furthermore, for students with academic lags, IDBP office provides one-to-one tutoring to help them improve their learning capability.

Besides concentrating on academic performance, IDBP students are encouraged to participate in a wide range of extracurricular activities to enrich their college life. For those who prefer exposing themselves to sunlight, they can join various IDBP sport teams such as basketball, volleyball, table tennis, and badminton teams; for those who prefer standing in the spotlight, they can take part in colorful social activities, such as Christmas and high-school uniform parties.





### Graduate Institute of Applied Science and Technology

http://www.gsas.ntust.edu.tw/

The Graduate Institute of Applied Science and Technology was originally established in 1979 as the National Taiwan Institute of Technology was developing its curricula to the graduate level. This graduate institute incubated many of the graduate programs that later became part of the College of Engineering in 1997, when NTIT was upgraded to university status. In 2008, this graduate institute became part of the Honors College and continues to perform its original role as an incubator, providing resources and support for the development of new interdisciplinary graduate programs.





### Graduate Institute of Biomedical Engineering

http://www.be.ntust.edu.tw

Biomedical engineering is one of the rapidly expanding engineering (and medical) disciplines which has a major impact on diagnosis and treatment of disease. It is advancing rapidly and producing important innovations that improve our quality of life. The Graduate Institute of Biomedical Engineering was established along with the university in 2009. It aims to educate high level engineers and researchers for the biomedical industries. The Institute offers graduate programs for master's and doctoral degrees and covers four main researching fields, namely Bioinformation, Bioelectronics, Biomechanics, and Biomaterials.

Biomedical engineering is a diverse multidisciplinary field that is establishing itself as an independent engineering discipline. Our cutting-edge research programs span a wide range of new interdisciplinary engineering discoveries and biomedical applications. From understanding the human genome to pioneering surgical tools, we are committed to the advancement of research and education in regenerative medicine, nano-medicine, biomaterials, bioinformatics, biomedical imaging, miniaturization sensing technology, noninvasive measuring technology, orthopedics/rehabilitation and biomechanics.

We are developing a small yet innovative BE Institute that is dedicated to producing graduates who are well-grounded in fundamental sciences and the rigorous analytical engineering tools necessary for lifelong success in the many possible bioengineering careers. With close collaboration with Tri-Service General Hospital and National Defense Medical Center, the Biomedical Engineering Research Center is jointly funded in January 2010. We have also extended our academic research with the cooperation of Taipei Medical University and Mackay Memorial Hospital. With joint strengths of medical expertise and biotechnology expertise, the Graduate Institute of Biomedical Engineering at National Taiwan University of Science and Technology is positioning itself as a leader for many years to come.











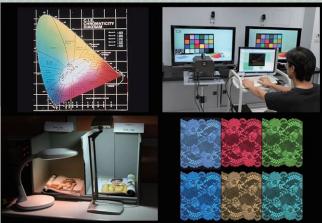


# Graduate Institute of Color and Illumination Technology http://color.ntust.edu.tw/home.php?Lang=en

Color science is a multidisciplinary science which is widely applied in various industries such as photonics, display, multimedia, design, lighting, graphic communication and textiles. Industries have been paying more attention to color science since it has become one of the key factors in improving imaging technologies. Taiwan has many leading imaging and solid state lighting manufacturers, but the competition from neighboring countries is intense. The key for the domestic manufacturers in competing with their rivals is to recruit high quality researchers who know human factors well.

The Graduate Institute of Color and Illumination Technology was established in 2011. The institute aims to provide high quality trainings for students who want to enter the color imaging and illumination industries. Our students will be able to bridge the gap between technologies and human factors, and playing an important role for manufacturers in improving their products.





# Bachelor Degree Program of Applied Science and Technology

http://www.ast.ntust.edu.tw/

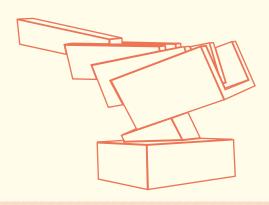
This program aims to recruit NTUST students with excellent technical skills. According to their expertise and individual differences, our instructors in the related fields are assigned to help them develop their learning plans. Furthermore, in cooperation with the industrial enterprises, the students will take internship in the enterprises when positions are offered. This program includes four concentrations: Electrical and Computer Engineering, Mechanical and Manufacturing Engineering, Architecture and Construction Engineering, and Chemical and Materials Engineering.



# College of Intellectual Property Studies http://www.ip.ntust.edu.tw/

Graduate Institute of Technology Management Graduate Institute of Patent

The College of Intellectual Property Studies is based on expertise relating to innovative IP and technology management that aims to bring forth the advantage of practicability embedded in the technological and vocational education system. Further, the College would focus on the exploitation of invented technologies and its commercialization. In the meanwhile, subject to the "learning by doing" education program, the student will be guided, through their IP trainings, to contribute in enterprise innovation, to support industry in IP fights and to promote knowledge-based economy development in Taiwan.



### Graduate Institute of Technology Management

http://www.tm.ntust.edu.tw/

Established in 2007, the Graduate Institute of Technology Management (GITM) offers a master's program specifically designed to articulate and illustrate the merging of business and technology in all industries and to equip students with the critical skills for future success in their business careers. Classes are not only taught by the faculty of the School of Management but also by experienced entrepreneurs and successful leaders from various industries. The Graduate Institute of Technology Management's interdisciplinary master's degree program is a unique alternative to traditional MBA, EMBA, and MSE programs that helps students to become future managers and entrepreneurs in high-tech businesses.









# **Graduate Institute of Patent**

http://patent-e.ntust.edu.tw/

Under the subsidy from the projects of "Aim for the Top University Project with 50 Billion NTD in Five Years" and the "Model University of Science and Technology Development" by the Ministry of Education, this university has been well-developed and is distinctive in the field of engineering technology, with rich experience in the cultivation of professionals in the field of management. For years, we have cultivated high quality engineering and technology management professionals. In view of the importance of patents in technology industries, the urgent demand in businesses for patent professionals, and the optimal environment to cultivate interdisciplinary patent professionals, we established the "Graduate Institute of Patent" on August 1, 2010.

### Development priorities and characteristics

The Institute is expected to be distinguishable from existing intellectual property-related research institutes of various universities and colleges in Taiwan. Based on the expertise of teachers, research, and development momentum in strategic planning and implementation, we focus on the implementation of the following characteristics:

- (1) To integrate inter-department, inter-college, and inter-university resources, provide a series of patent-related courses, and cultivate patent professionals with science, management, and legal background knowledge;
- (2) Through industry-academia cooperative practical courses, cooperative teaching mechanisms, and cooperation and exchange, to cultivate professionals with theoretical knowledge and practical experience;
- (3) To work with Intellectual Property Office, Intellectual Property Courts, Patent Attorney Association, and other units and university technology transfer centers, to cultivate professionals for patent protection and the legal system, thus, enhancing the patent system of Taiwan to the international level and quality.

The Institute is also expected to provide the following characteristics of theoretical research and practical development:

- (1) Technology and patent mining;
- (2) Technology and patent analysis layout;
- (3) Patent infringement identification and litigation;
- (4) Patent added-value and header strategy.



NATIONAL TAIWAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

## Research at Taiwan Tech

Through 38 years of growth and evolution, Taiwan Tech has been recognized for its academic and practical achievements in such areas as cooperation with industry, promotion of entrepreneurship and technology licensing.

Taiwan Tech envisions itself as an international applied research university. The research achievements of Taiwan Tech's faculty and students have great commercial potential, and Taiwan Tech has derived considerable income from its intellectual property rights, technology transfers, and licensing fees, placing Taiwan Tech in the first rank of Taiwan's universities for its research capabilities.

Though a relatively young institution in Taiwan, Taiwan Tech has been a pillar of the nation's economic development, and we aim to become an icon of Taiwan's excellence on the international stage.

The Office of Research and Development was established as a bridge among the university itself and government organizations and enterprises, with the aim of strengthening cooperative relationships. The office has four centers including (1) the Industry-University Cooperation Center (IUCC), (2) the Business Incubation Center (BIC), (3) the Technology Transfer Center (TTC), and (4) the General Affairs Center.



The Business Incubation Center at the Nei-Hu Science Park

### Research Highlights

Distinguished Research Award from the NSC	From 1990 to date a total of 65 faculty members have received the Distinguished Research Award from the National Science Council, ranking Taiwan Tech No. 6 in Taiwan.
Technology Licensing	Ranked No. 1 in Taiwan by the NSC for its cumulative total fees received for technology licensing over the last 10 years.
Outstanding Industry-University Cooperation	Received the Outstanding Industry-University Cooperation Award from the Chinese Institute of Engineers for 12 years in a row, the only university in Taiwan to have done so.
Enterprise Incubation	Incubate innovative small and medium-sized enterprises; Promote commercialization of R & D results; Impetus industrial restructuring; Provide consultation for public stock offerings.

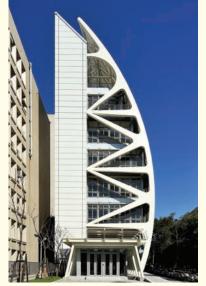
### Taiwan Building Technology Center

http://www.tbtc.ntust.edu.tw

The Taiwan Building Technology Center (TBTC) was established in 2007 using special funding granted by the Ministry of Education under its Top Universities and Elite Research Centers Development Plan. NTUST's goal is to become an international applied research university, and is the only university in Taiwan to have established a new research center focusing on building-related issues. In recent years, the TBTC has successfully integrated the NTUST professors from the different colleges and departments of engineering, design, and the humanities, to work together in pursuit of new building technologies that can enhance the positive impact of our built environment on the safety and quality of people's lives.

The TBTC has put a lot of emphasis on internationalization, gathering outstanding researchers from Taiwan and abroad for collaborative research, and has bridged the NTUST research teams with more than 50 European partners to successfully participate in six European FP7 projects, extending from 2009 until 2017. Through these multiple-year cooperation projects, the NTUST research teams have entered into remarkable partnerships with researchers of difference backgrounds, experience, and perspectives, partnerships whose synergy can provide insights and innovations for the building-related industries in each of the participating countries. These insights and innovations might not be possible without the stimulation provided by these collaborations.

The TBTC has two main research groups: the Intelligent Buildings Research Group and the Life-Cycle System Design for Buildings Research Group. These two groups focus on key technologies affecting buildings at each stage of their life-cycles. At the same time, the two groups also work on new building and ICT technologies that can create energyefficient buildings with a reduced carbon footprint. In addition, the new TBTC building provides a real-world laboratory for testing and exhibiting the ideas and results of the Center's projects, thus assisting the TBTC in taking its place on the world stage as a leading research center for intelligent green building technology.







Roof Platform

### I. Intelligent Buildings Research Group

With Taiwan's ageing population, later retirement, and decreasing birthrate, future buildings will be required to provide intelligent residential and office space that is not only eco-friendly and energy-saving but also able to offer home care, security monitoring, intelligent lighting systems and a comfortable and healthy living environment. In pursuit of these goals, the TBTC has set up the Intelligent Buildings Research Group, which has been placing its main focus on Always Available and Accountable communications platforms, color and illumination systems, and energy conservation and ventilation.

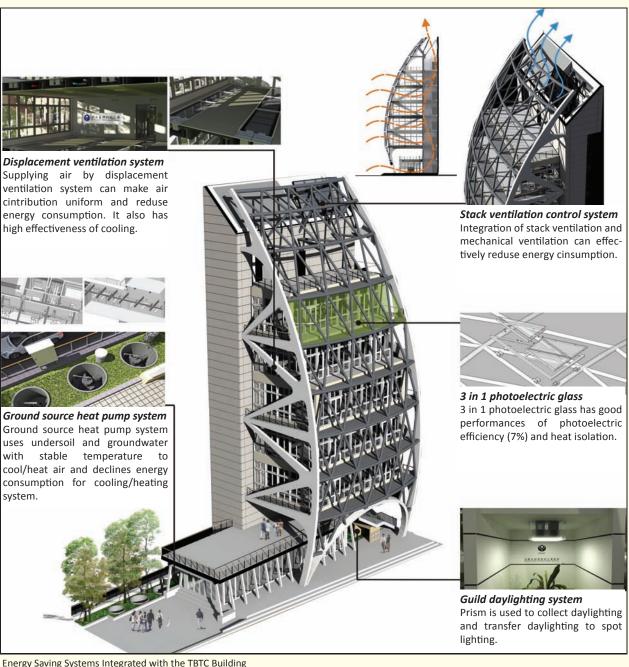
The Intelligent Building Telecommunications Platforms is divided into three sub-projects: (A) auto-monitoring and multi-functional broadband integrated video systems; (B) broadband wireless network systems integration; (C) RFID systems and sensor network components. The intelligent and ergonomic illumination research group has set up a specially designed laboratory to investigate the brightness and color temperature of different ambient light sources and how they affect eye comfort and fatigue as well as preferred color. The energy conservation and ventilation research project has focused on using nanotechnology and opto-electronics to develop a kind of "intelligent" glass that can provide heat insulation, power generation, and self cleaning.



Taipei 101 Earthquake Resistant Beam-to-Column Connection for Steel Structure Application

### II. Life-Cycle System Design for Buildings Research Group

The Life-Cycle System Design for Buildings Research Group emphasizes on building system reliability, structural performance, and structure & facility performance. The building life-cycle performance evaluation and decision support systems focus on developing an efficient method for computing the time-dependent reliability, risk and cost within a building system and then creating a support system for multiple-objective decision making. Through research and development on high performance structural materials, structural components, and structural systems, the efficiency of the structural materials can be enhanced and the amount of both structural and construction materials used in buildings can be reduced. The goal of innovative R&D of Green Materials Produced from Waste is to manufacture green building materials by using low energy consumption methods to apply activation and gel-forming technologies that can transform existing industrial and agricultural wastes into bonding materials and light-weight aggregates. The research on Thermal Environmental Control Technology and Policy for Building Renovation seeks to conduct a complete integrated examination of the renovation of existing buildings, through investigating their thermal environmental control, setting up renovation decision support systems, and integration of the building's existing facilities with a ground source heat pump system. The New Generation Facility Performance and Power Systems research investigates how facility systems can provide open access and sustainable performance, with special focus on breakthroughs in building drainage-system problems, development of power generation potential in future building system design, and systems for power management in buildings.



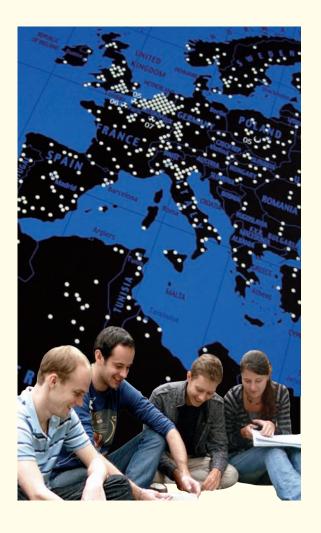
Energy Saving Systems Integrated with the TBTC Building

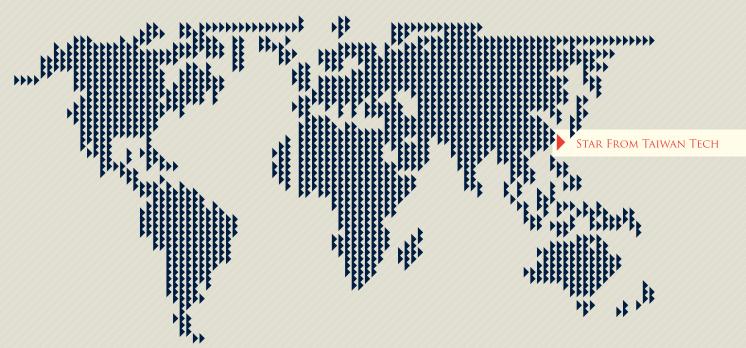
### Other Research Centers

Currently, there are 25 specialized research centers. Listed below are some of these centers.

Taiwan Building Technology Center Power Electronics Technology Center Materials Science & Technology Center Intelligent Robot Center **Automation & Control Center** Occupational Health & Safety Center Construction Safety and Health Center Opto-Mechatronics Technology Center, CLA Taiwan Information Security Center Sustainable Energy Development Center Center for IOT Inovation, CITI Nano Technology Center Color Technology Research Center Ecological and Hazard Mitgation Engineering Research Center The Center for the Study of Lottery and Commercial Gaming Communication and Electromagnetic Technology Center Center for Humanities and the Arts Commatrix E-Learning Research Center Taiwan Information Security Center (TWISC@NTUST) Chemical Mechanical Planarization (CMP) Innovation Center, CIC

The work of these research centers is coordinated and facilitated through the Office of Research and Development and its own three centers, namely, the Industry-University Cooperation Center (IUCC), the Business Incubation Center (BIC), and the Technology Transfer Center (TTC). All these centers are essentially the channels through which the university's research results can be linked with the needs of industry for development and applications.







NATIONAL TAIWAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

# Internationalization at Taiwan Tech

After many years of making significant contributions to Taiwan's economic growth through our training of managers and engineers and research cooperation with local industry, Taiwan Tech has turned its focus to the world stage, pursuing programs of internationalization that reach into every area of campus life. These efforts of our departments and research centers are supported by the various administrative and service offices of the university, along with our newest top-level administrative unit, the Office of International Affairs.

On campus, internationalization has meant recruiting students from abroad to study for degrees at Taiwan Tech, as well as to take courses or engage in research work through various exchange programs. This international student contingent has already expanded to around 5% (over 500 students) of our total student body, representing over 40 countries. The numbers of students from Indonesia, Vietnam, India, Ethiopia and Latin America are already large enough to form their own student associations. In addition, there is the Association for International Affairs (AIA), a group of local students with a mission to assist our international students in making the most of their stay in Taiwan, through services extending from help for new arrivals to support of cultural activities and arranging for tours of Taipei's and Taiwan's scenic and cultural treasures. The university also supports the internationalization of our degree programs by encouraging a steady increase in the number of English-taught courses at the graduate level, while making intensive efforts through summer and additional regular-term English training to raise the language capability of our local students, while also providing free Mandarin language training for our international students. On the faculty and administrative level, Taiwan Tech welcomes a large number of international scholars each year, including for long or short term faculty appointments, international conferences, seminars or lectures, research projects, or just to discuss establishing a cooperative relationship with their home institutions, thus adding to the list of over 200 academic institutions on four continents with which we have signed such agreements.

Off campus, internationalization has meant our sending students abroad for dual-degree programs, student exchanges, short-term laboratory research or summer study programs, and internships in overseas companies. Our students can compete for several types of study-abroad scholarships to support their quest for international experience. Our faculty is also representing Taiwan Tech overseas in many capacities, whether presenting papers at international conferences, recruiting students for our graduate programs, or planning international research projects with colleagues abroad. Recognizing NTUST's considerable efforts to build relationships with individual universities and with the entire higher education sector in Indonesia, the Ministry of Education commissioned NTUST in 2011 to set up the Taiwan Education Center (TEC) Indonesia, with offices currently located at the University of Surabaya (UBAYA). This new TEC is expected to be the connecting link between Indonesian students and universities in Taiwan, as well as being a bilateral exchange platform between the two countries.

Because of Taiwan Tech's original and very successful mission of support for the local economy, we were later than many other Taiwan universities in beginning our internationalization efforts, but as a result of our usual intense dedication to substance and quality, we now stand proudly with our peers among the Taiwan Top University Grant recipients on the global stage, confident of the significant contributions that we will strive to make to the future of Taiwan and the world.



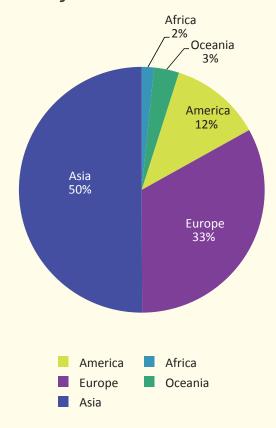




# Internationalization Highlights

International Cooperation	Over 200 MOUs and related cooperation agreements with institutions of higher education and research from over 55 countries.
Foreign Students	611 international students from over 55 countries on campus, comprising about 6% of our student body.
International Conferences	Each year over 20 major international conferences, including annual meetings of international professional organizations, are held on our campus.
International Research Projects	Each year an average of 14 cooperatively funded projects have been conducted on our campus, with partners from Japan, the United Kingdom, Russia, Indonesia, the United States, and Poland.
English-Taught Degree Programs	Each academic year, about 20% of the courses that we offer are taught in English. These courses make up the 10 relatively complete English-taught master's and doctoral degree programs covering a wide range of disciplines that we provide for our international graduate students.
Taiwan Education Center (TEC)	In 2011, Taiwan Tech set up the TEC at Ubaya in Indonesia, to establish and promote educational cooperation and exchange between Taiwan and Indonesia.

# Distribution chart of Taiwan Tech's International Academic Alliances for 2013





President Liao exchanged gifts with Mr. Johnny C. Taylor, Jr., the President & CEO of the Thurgood Marshall College Fund



The Vice-Chancellor of Lund University, Prof. Per Eriksson, led a delegation on a visit to Taiwan Tech

### Exchange Student Program

### Who can Apply

Full time students from Taiwan Tech's partner universities are encouraged to apply for the program. The applicants will be nominated by their home universities.

#### How to Apply

#### STEP1

Applicants contact home university for nomination.

#### STEP2

Fill out the application form and prepare all the required documents.

#### STEP3

Send the completed application form with required documents to the Office of International Affairs by the deadline.

#### STEP4

Application will be assessed by Taiwan Tech.

#### STEP5

Nominated students will be notified via e-mail. The letter of Acceptance will be sent to the home university by mail.

### When to Apply

Semester	Application deadline
Fall semester (September)	May 31
Spring semester (February)	November 30

### Courses

Taiwan Tech offers more than 160 courses taught in English. Detailed information on courses can be found at http://140.118.31.215/querycourse/EngCourseQuery/QueryCond.aspx.

### Campus Life

**Dining** 

### **On-Campus Housing**

Exchange students may apply for on-campus housing. (Limited spaces available).

Several facilities on campus offer a variety of types of food, including buffet, set menus, noodles, snacks and special foods.

### Health Services

An infirmary with completely new facilities has established, providing multifunctional health care services and up-to-date medical services for students and faculty members.

### **Sport Facilities**

Sports facilities include tennis courts, table tennis, billiards, fitness equipment, a gym and an indoor swimming pool.

### **Network Services**

Wired and wireless networks are provided on campus.

### Free Mandarin Chinese Language Program (CLP)

CLP focuses on daily conversation on various topics and is offered by the Continuing Education Center, detailed information on courses and application can be found at www.cec.ntust.edu.tw/course.aspx.







## Scholarship

### (1) NTUST Scholarship

Graduate students from abroad applying for admission to our English-taught programs for master's and doctoral degrees as full-time students may apply for one year's financial aid; continuation of the scholarship depends on the student's academic and research performance. The type of NTUST scholarship will be determined by the department based on the applicant's qualifications. For scholarship recipients, tuition and fees are waived for each year of the scholarship.

#### (2) Taiwan Scholarship

In order to encourage students from other countries to pursue higher education in Taiwan, the Ministry of Education and Ministry of Foreign Affairs award scholarships for international students. For detailed information regarding the Taiwan Scholarship, please check with the Taiwan embassy or Taiwan representative office in the students' home country, or see the MOE and MOFA websites.

### (3) Financial Aid (For current students)

Full-time undergraduate and graduate international students, who have completed their previous semester with satisfactory academic performance and receive no other scholarships sponsored by the Taiwan Government or a university are eligible to apply.

### Cost of Study

Currently undergraduate students pay approximately NT\$47,000 to NT\$53,000 per semester for tuition and fees. For graduate students, the tuition and fees are approximately NT\$47,000 to NT\$54,000. Books and supplies cost about NT\$10,000 per semester.

### Housing and Living Costs

All international students have priority in applying for dormitory space. The cost is around NT\$7,000 per semester. Eating at university dorm cafeterias costs around NT\$6,000 per month.

## How to Apply

Taiwan Tech runs 2 semesters in each academic year. Fall semester is from September to January of the following year, while spring semester is scheduled from February to June. The application deadline for admission in the fall/spring semester is Mar. 31/Oct. 31 in each year. All applications must apply online via the Admissions webpage on the university's English website. There is no application fee charge.

### Correspondence and Information

OFFICE OF ACADEMIC AFFAIRS

Website: http://www.academic.ntust.edu.tw/home.php?Lang=en

Graduate-Tel: 886-2-2730-1296

Fax: 886-2-2730-1027

E-mail: admission@mail.ntust.edu.tw

Undergraduate-Tel: 886-2-2737-6300

Fax: 886-2-2737-6661

E-mail: undergraduate@mail.ntust.edu.tw



Campus Buildings



**Swimming Pool** 



IB Plaza



Library Corner

# NATIONAL TAIWAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

INTRODUCTION

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