



NTU GSAT
國立臺灣大學重點科技研究學院
Graduate School of Advanced Technology, National Taiwan University



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GSAT website

• GSAT at a glance

Established in Dec. 2021 to

- 1 Cultivate high-quality forward-looking technology R&D talents.
- 2 Foster in-depth international industry-university cooperation.
- 3 Enhance the international competitiveness and status of industries and academics in the semiconductor field.

◆ 7 Industry Sponsors



4 Key fields

8 Degree programs

◆ Integrated Circuit Design and Automation (ICDA)

The ICDA program aims to address the growing demand in research of the two main areas:

- (1) integrated circuit design: digital circuit design, AI, analog/mixed-signal circuit design, in-memory computing, and RF front-end circuits.
- (2) electronic design automation: AI for EDA, EDA for AI, heterogeneous integration, and emerging technology EDA. ICDA professors and students develop technologies applicable to emerging fields such as 5G/6G, automotive electronics, artificial intelligence, medical electronics, and information security.

◆ Semiconductor Devices, Materials, and Hetero-integration (DMHI)

DMHI's curriculum integrates modern device physics and material science to provide a comprehensive graduate program that studies advanced CMOS technology for 3 nm and beyond, compound materials and devices technology, solid-state physics, semiconductor device physics, semiconductor process technology, material thermodynamics, quantum applications, advanced memory devices and materials, display technology, SI/PI/RFI/EMI design for heterogeneous integration, and more.



◆ Nanoengineering and Nanoscience (NENS)

The NENS program is dedicated to fostering innovation and practical application of nanoengineering and nanoscience technology. The NENS program is divided into three fields:

- (1) low-dimensional semiconductor research.
- (2) nanoengineering and micro-electro-mechanical systems (MEMS/NEMS).
- (3) advanced process and precision measurement.

◆ Precision Health and Intelligent Medicine (PHIM)

The PHIM program aims to cultivate talent with expertise in developing precision medical technology from the perspectives of big data, intelligent medical devices, and clinically-initiated medicine. To promote cross-disciplinary research and foster connections with the biotech and semiconductor areas, the program focuses on the following fields:

- (1) precision medicine.
- (2) advanced medical imaging.
- (3) innovative medical devices and genomics.



★ Course features

- 1 Industry R&D internships
- 2 Industry experts delivering courses
- 3 English as a Medium of Instruction (EMI) courses

★ Scholarship Opportunities

- 1 **Scholarship for Elite Doctoral Students**
NTD 50,000/month = USD 1,650/month
Tuition Waiver
- 2 **Scholarship for Elite Master Students**
NTD 20,000/month = USD 660/month

