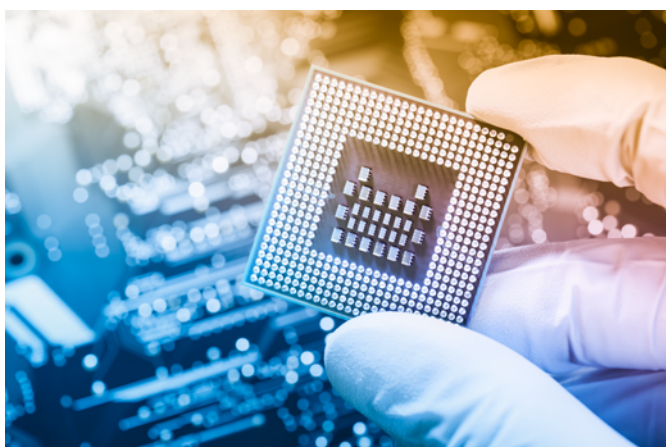


SUTD-CGU Dual Masters Programme in Nano-Electronic Engineering and Design (Full-Time)



About Singapore University of Technology and Design (SUTD)

SUTD is Singapore's fourth autonomous university and one of the first universities in the world to incorporate the art and science of design and technology into a **multi-disciplinary curriculum**. SUTD's core academic pillars are:

- Architecture and Sustainable Design (ASD)
- Engineering Product Development (EPD)
- Engineering Systems and Design (ESD)
- Information Systems Technology and Design (ISTD)

About Chang Gung University (CGU)

Chang Gung University (CGU) is located in Taoyuan, Taiwan. It was ranked as the **top private university** in Taiwan by the Academic Ranking of World Universities 2016 and is well-established in semiconductor, integrated circuit design, assembly and failure analysis research.

CGU is part of the Formosa Plastics Group conglomerate and maintains strong industry links with the Taiwan electronics sector.

Upon successful completion, students will graduate with two Master degrees:

- **Master of Science - Nano-Electronic Engineering and Design from CGU**
- **Master of Engineering (Research) from SUTD**

Admission Schedule / Deadlines

There is one intake each year in **September**. The application deadline for each intake is **end of March**.

Please apply at <https://admission.sutd.edu.sg>

Programme Overview

The SUTD-CGU Dual Masters Programme in Nano-Electronic Engineering and Design is a unique, multi-disciplinary learning experience encompassing the full value chain of the **semiconductor industry**.

This programme covers research and coursework in integrated circuit (IC) design, production, packaging, testing, reliability and failure analysis, chip assembly and packaging, particularly in the emerging areas of nano-electronic **design, production** and **testing**.

Industry Coursework at CGU

At CGU, students will gain real-life immersion with Taiwan's leading IC design and semiconductor foundries while undergoing CGU's **industry-oriented curriculum**.

Master Research at SUTD

At SUTD, students will complete their **Master thesis** and research project (design implementation, fabrication, testing and assembly). They will also be equipped with **industry-relevant knowledge** via SUTD's Professional Short Development Courses.

Candidature Period (minimum of 18 months)

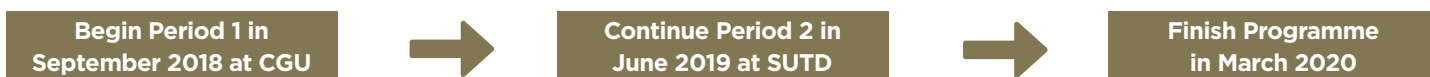
	Period 1 (at CGU)	Period 2 (at SUTD)
Candidature Period	9 months (September to June)	9 months (June to March)

Maximum candidacy of the programme is **36 months**.

Curriculum Overview

The SUTD-CGU Dual Masters Programme starts in September at CGU and ends in March at SUTD.

Example:



To fulfill coursework requirements at CGU, students must specialise under either of the following academic tracks:

• Integrated Circuit (IC) Design Track

Under this Track, students will learn more about the tools, software and processes required to conduct analysis, design and development of a wide variety of ICs (analog, digital, radio frequency, mixed-signal).

• Advanced Manufacturing Track

Under this Track, students will learn more about the integral aspects of IC production quality and reliability management. This includes reliability and failure analysis, failure mechanisms and packaging reliability.

Period 1 (9 months) at CGU	Period 2 (9 months) at SUTD
<p>Compulsory Modules</p> <ul style="list-style-type: none"> • Reliability Engineering • Introduction to VLSI: Technology and Design • Test and Measurement for VLSI • Advanced Transistor Modeling for VLSI Design <p>Elective Modules (students must complete at least 4):</p> <p>IC Design Track</p> <ul style="list-style-type: none"> • Digital Electronics • Analog Electronics • RF IC Design • Mixed Signal Design • Bio-Medical Electronics* • Nano-Materials and Devices* <p>Advanced Manufacturing Track</p> <ul style="list-style-type: none"> • Failure Analysis for VLSI • Failure Mechanisms in VLSI • IC Packaging Reliability • Quality Engineering • Bio-Medical Electronics* • Nano-Materials and Devices* <p><i>*Students can choose either Bio-Medical Electronics or Nano-Materials and Devices, but not both.</i></p>	<p>Master Thesis and Oral Defense</p> <p>Students will complete their research thesis and project (design implementation, fabrication, testing, assembly via close co-operation with IC foundries) while at SUTD.</p> <p>This Master thesis will be subject to an Oral Defense, where students will defend their research against professional critique by a board consisting of SUTD faculty and external faculty/industry experts.</p> <p>Professional Development Short Courses</p> <p>Students are required to complete at least 4 Professional Short Development Courses. Topics covered include:</p> <ul style="list-style-type: none"> • Intellectual Property Clinic • Scientific and Grant Writing • Entrepreneurship • Private Equity & Fund Raising for Businesses • Corporate Grooming & Personal Branding • Leadership & Teamwork <p>View a full list of courses and course overviews at</p> <p>https://sutd.edu.sg/Admissions/Graduate/Professional-Development-Short-Courses</p>

Admission Requirements

Applicants should possess the following:

- At least a **Bachelor's degree** or above with excellent academic standing in mathematics, physics, engineering, computer science or related fields.

- Proficiency in English (**IELTS** or **TOEFL** is required if English is not your medium of instruction in your studies)

Contact Us

For admission and programme enquiries:

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View SUTD Faculty's Research Here:

EPD <https://epd.sutd.edu.sg/people/faculty/>
 ESD <https://esd.sutd.edu.sg/people/faculty/>
 ISTD <https://istd.sutd.edu.sg/people/faculty/>
 Sci & Math <https://academics.sutd.edu.sg/science-math/science-faculty/>