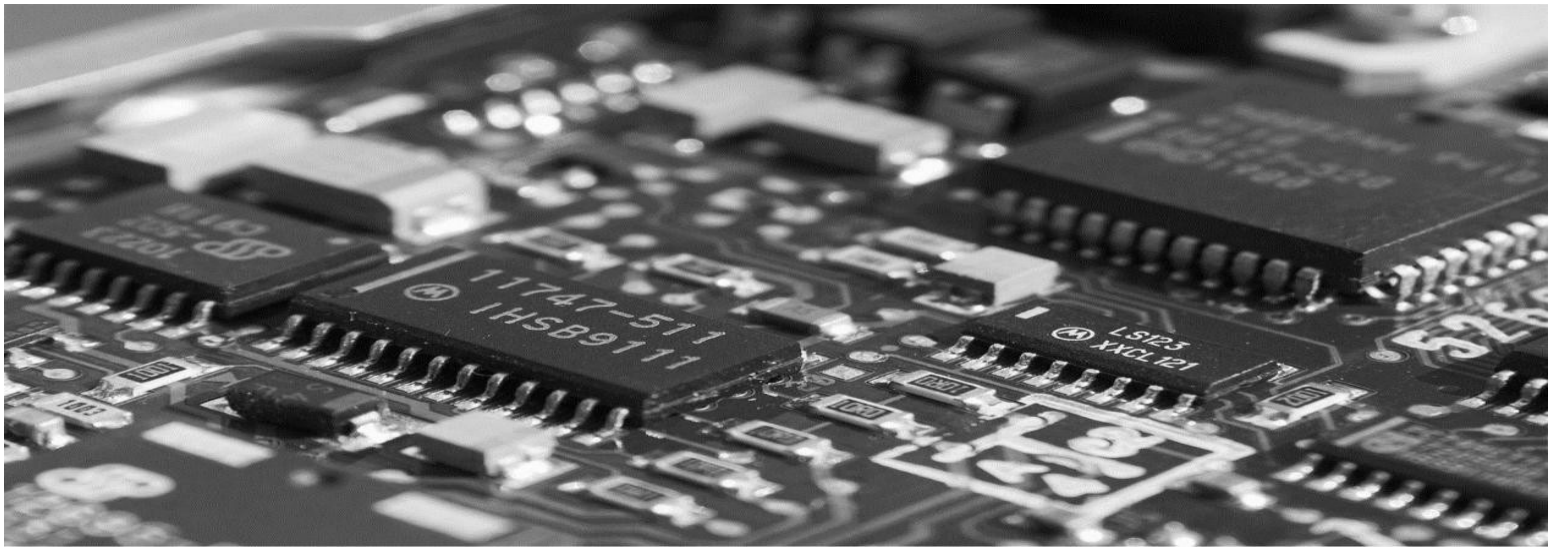
Branch:Electrical Engineering



Code: INCIDE
Option: Integrated circuit design
Level: Master
Prerequisites:
Opportunities:
Graduates may choose to enter industry to work in IC design engineering roles or in research where they continue as research associates/ PhD candidates. Graduates typically find employment in countries such as Singapore, Germany and India, while others choose to return to work in their home country.

Description:
The program covers analogue to digital and mixed-signal circuit design, architectural concepts for integrated circuits, design methodology and automation.
What happens in this study program?
The International Master of Integrated Circuit Design, offered jointly by Nanyang Technological University (NTU) and the Technische Universitaet Muenchen (Technical University of Munich, UUT), aims to train the next generation of engineers and business leaders in the rapidly evolving semiconductor industry. The evolution of integrated circuit (IC) technology has had a huge impact on our daily lives. The incredible technological advances of the past 50 years have allowed us to integrate billions of transistors on a single integrated circuit. At the same time, the cost of a single transistor has decreased

exponentially. As a result, every day new and attractive applications for the use of integrated circuits open up, allowing the semiconductor industry to grow much faster than the overall economy. However, the ability of the semiconductor industry to intelligently use all these transistors to design successful products has not kept pace with manufacturing capabilities. The electronics and semiconductor industries are therefore constantly looking for well-trained IC design engineers.

The two-year full-time master's program includes content ranging from analogue, digital and mixed-signal circuit design, architectural concepts for integrated circuits, design methodology and automation. Product manufacturing and testing are also covered. IC design is also placed in a broader context, teaching the fundamental concepts of signal processing that are at the heart of today's communication circuits. Students will also be taught key non-technical topics such as product marketing, international management, patent law and aspects of culture and globalization. This teaching will be delivered mainly by highly qualified lecturers from industry.

Quality and competences:

Graduates of the joint UUT-NTU Master of Science in Integrated Circuit Design program are technically proficient and have in-depth knowledge of integrated circuit design, with a focus on both architectural concepts of integrated circuits and circuit design methodology and automation.