



# National Chiayi University

## Department of Electrical Engineering



# Mission Statement

The mission of the Department of EE on the undergraduate program is to impart a basic understanding of electrical engineering built on a foundation of physical science, mathematics, computing, and technology. Undergraduate students in the department take a common core of three subjects that serves as their introduction to electrical engineering, computer science and control system. Students can systematically build up wide groundwork. Laboratory subjects, independent projects and research opportunities provide engagement with principles and techniques of analysis, design, and experimentation in a variety of fields. The department also offers a range of programs that enable students to obtain experience in industrial settings, ranging from collaborative industrial projects done on campus to long-term experiences at partner companies. Graduate study in the department moves students towards dominion of areas of individual interest, through course work and significant research, often defined in interdisciplinary areas that take advantage of the enormous range of faculty expertise in the department.

# Academics and Admissions

The EE offers a Graduate Program with Master of Science and Undergraduate programs. Our flexible curriculum gives students a holistic view of the field, and an understanding of how to solve problems, from software, control, communication to bioengineering. Bachelor of Science in EE program provides a solid foundation in the fundamentals of engineering and science and a variety of electives to tailor studies to a specific technical interest. The program is offered as a full-time program, and the average length of time it takes students to complete the full-time program is 3 to 4 years.

# Faculties and Researches

- Nine academic faculty members who come from a variety of extraordinary research institutes and top industries in the world.
- Research backgrounds: Electromagnetics, VLSI Systems, Digital Signal Processing, Energy, Imaging Processing, Telecommunications, Computer Systems, Optics and Power Electronics.



*Chi-Wen Hsieh, Professor (Chair)*

Ph.D. of Department of Electrical Engineering, National Tsing Hua University  
Research: Medical image processing, medical wireless communication, DSP

- **AI application**
- **Medical electronics**

*Chun-Chi, Chen, Assistant Professor*

Ph.D. of Department of Electrical and Computer Engineering, Texas A&M University  
Research: Bio-medical applications, Deep learning, DSP

- **Signal Processing**
- **Bio-Medical application**





***Chi-Chung Chen, Associate Professor***

Ph.D., Electrical Engineering, University of California, Los Angeles

Research: chaos signal processing, communication system, control system

- **Robotics**
- **Automatic control application**

***Roy Chaoming Hsu, Professor***

Ph.D., Electrical Engineering and Computer Science, Pennsylvania State University

Research: Machine learning, image processing, embedded system

- **AI application**
- **Robotics**





## *Cheng-Ta Chiang, Professor*

Ph.D., Electronics Engineering,  
National Chiao Tung University

Research: Analog integrated circuits, bio-  
medical IC, sensor interface and signal  
conditional circuits, ADC, SDM modulator

- **Analog IC design**
- **Sensor design and application**

## *Kwang-Jow Gan, Professor*

Ph.D., Electrical Engineering,  
National Cheng Kung University

Research: IC design, IC engineering, solid  
lighting design, nano materials and testing,  
semiconductor devices

- **IoT application in new agriculture & aquaculture**
- **Electro-optical system application**







***Ching-Hung Chang, Professor***

Ph.D. of Electronics Communication Engineering, University of Hertfordshire, UK  
Research: Communication system, fiber-optic communication, MAC Protocol design, digital logic design, microprocessor application

- **Fiber-optic and lighting application**
- **Microprocessor application**

***Yao-Jen Liang, Associate Professor***

Ph.D., Communication Engineering, National Taiwan University  
Research: Wireless communication system, statistical signal processing

- **Wireless communication system**
- **Internet of Vehicle**







## *Hung-I Hsieh , Associate Professor*

Ph.D., Electrical Engineering,  
National Taiwan University

Research: Power electronics, high-  
efficiency electricity conversion, EMI,  
power IC, renewable energy

- Power electronics application
- Green energy system

# Laboratories and Facilities

The department provides a computer classroom for software development, an electronic circuit experimental classroom for VLSI development, a multimedia classroom for interactive teaching, and a meeting room for research discussion.

- Professional research laboratories \* 9
- IC design and electro-optical system application, Intelligent learning and recognition, Signal processing, Biomedical application & signal processing, Power electronics and renewable energy, Mixed-signal IC and system, Fiber communication, Wireless communication, Automatic control

# Teaching Lab. Introduction I

- Fundamental teaching laboratory:
- **Electric circuits lab.**



# Teaching Lab. Introduction II

- Fundamental teaching laboratory:
- **Logic design lab.**



# Teaching Lab. Introduction I I I

- Fundamental teaching laboratory:
- **Micro-processor lab.**





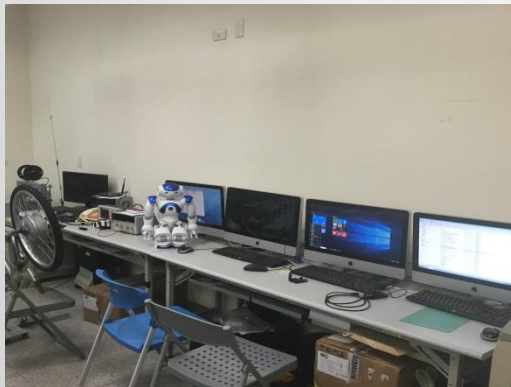
# Teaching Lab. Introduction IV

- Fundamental teaching laboratory:
- **Computer and multimedia lab.**



# RESEARCH LAB. I

- Professional research laboratories \* 9
- **IC design and electro-optical system application, Intelligent learning and recognition, Signal processing, Biomedical application & signal processing, Power electronics and renewable energy, Mixed-signal IC and system, Fiber communication, Wireless communication, Automatic control**



**Intelligent learning  
and recognition**



**IC design and  
electro-optical  
system application**



**Signal  
processing**



# RESEARCH LAB. II



**Biomedical application  
& signal processing**



**Power electronics and  
renewable energy**



**Mixed-signal  
IC and system**



**Fiber  
communication**



**Wireless  
communication**



**Automatic  
control**

# Welcome to Department of EE

Welcome to the Department of Electrical Engineering (EE) at National Chiayi University. Our faculty and students continue to advance the state-of-the-art, define new directions for electrical engineering, and develop new technologies to help society in the field of communication, energy, control, power electrics and etc. Even more important mission in EE department is to continue commitment to our students in order to help them learning, growing, and arriving their goals. If you are joining us as a student, we look forward to your contributions to the department and to EE in general.

Welcome to visit our website to get more information.

