

# Electronic Engineering Undergraduate Programme 電子工程學本科生課程

中大電子工程學 (CUHK ELEG) 聯招編號: JS4434

**Professional Career Path: Accredited Bachelor of Engineering Programme by the Hong Kong Institution of Engineers (HKIE)**

**Recognised Research Performance:**

One of the CUHK panels with the highest ratio achieving "3 star" and "4 star" in Research Assessment Exercise 2020

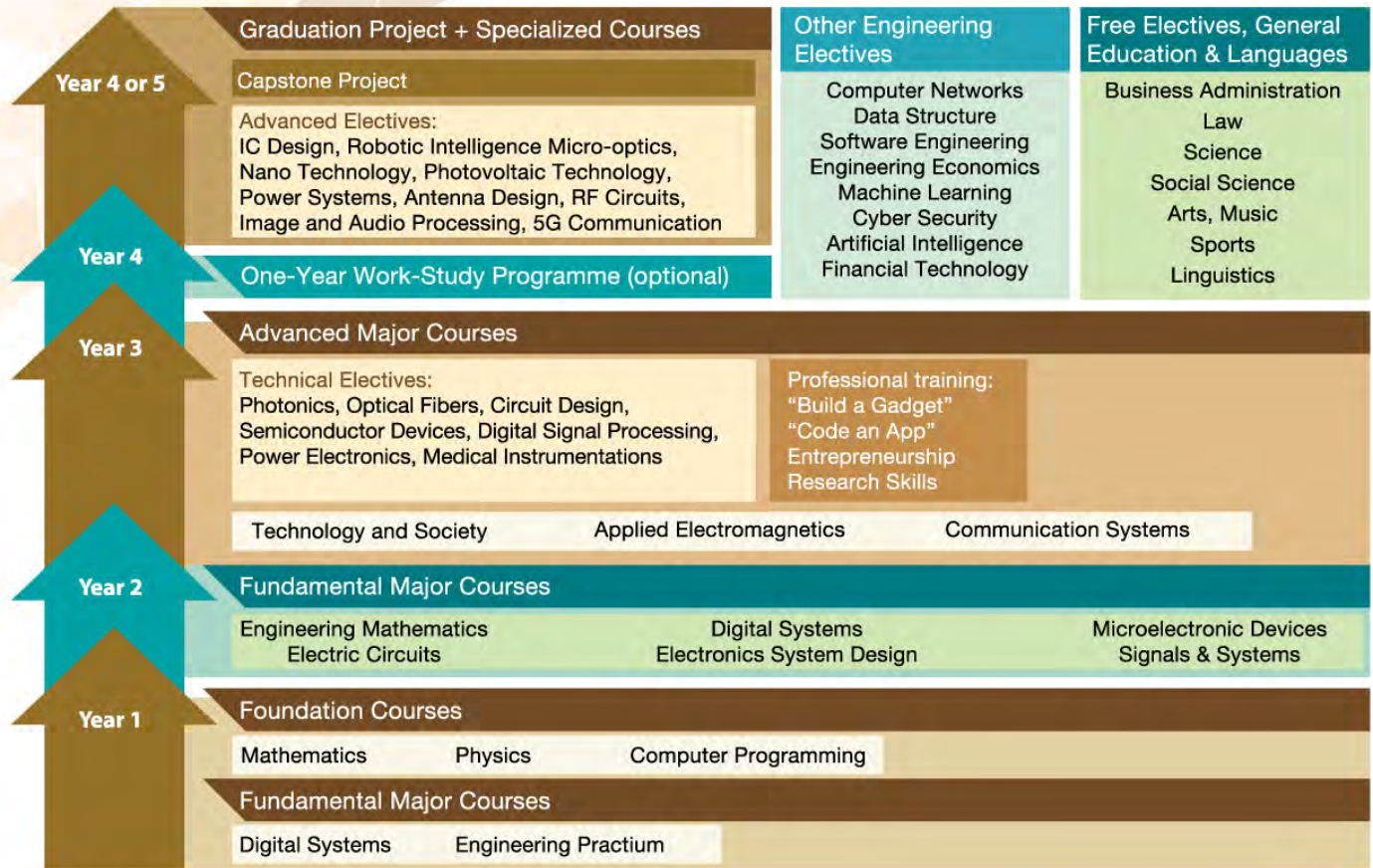
**CUHK EE programme admits students directly through**

- JUPAS channel
- SNDAS channel
- Other admission channels (for applicants with other academic qualifications such as Associate Degree/ Higher Diploma, IB, GCE AL, etc.)

Our mission is to educate future leaders in electronic engineering, to pursue knowledge and advance state-of-the-art electronics, including hardware, software and design with electronics as the core, from materials, devices, circuits to systems, and the applications of such technology to meet societal and individual needs. In both teaching and research, the Department is guided by the highest international standards.



## Curriculum Structure 課程結構



## Student Whole-person Development

### Work-Study Programme 工讀計劃

Our work-study programme was first introduced in 1975 in the belief that combining course work and industrial training would narrow the gap between academic education and practical engineering. Students can participate in the work-study programme, as full-time employee and continue his/her final year of study after that. Most of the students appreciated that the work-study experience was a precious opportunity to learn from what a professional engineer actually do before kick-starting their career.

#### Participating companies include:

- CLP Power Hong Kong Limited
- Electrical and Mechanical Services Department, HKSAR Government
- HSBC (The Hong Kong and Shanghai Banking Corporation Ltd.)
- MTR (Mass Transit Railway)
- SmarTone Telecommunications Ltd.
- VTech Telecommunications Ltd.
- ASM Assembly Automation Ltd.
- Hong Kong Science and Technology Park



### Overseas Exchange Programme 海外交流計劃

EE students can gain international exposure by going for a short term or year-long overseas exchange. Examples: University of Pennsylvania (USA), Technical University of Denmark (Denmark), Karlsruhe Institute of Technology (Germany), KTH Royal Institute of Technology (Sweden), Nanyang Technological University (Singapore)



EE students having an extraordinary learning experience in visiting technology giants and start-up companies in Silicon Valley, California during July 22 - August 2, 2019.



**BANG, Tae Won**  
Visited Georgia Institute of Technology in USA in 2019-20



**Mr. Leung Ho Man**  
Received the prestigious Innovation and Technology Scholarship to support his one-year exchange programme to the University of Liverpool in the UK in 2019-20.

## Comprehensive Learning Environment 全方位學習環境

The Teaching Laboratory II and showroom with the latest equipment were newly opened from 2021.

## Undergraduate STEM Ambassador Programme STEM 學生大使計劃

The "50th Anniversary Undergraduate STEM Ambassador Programme" is conducted by our Undergraduate STEM Ambassadors, coaching other CUJEE peers or/and secondary students. Students could enrich their electronic engineering background by learning and applying theoretical engineering knowledge to real-life applications.



## Innovation and Research 創新與科研

Research Assessment Exercise 2020 (RAE 2020), which is an extensive independent assessment of research performance of the eight UGC-funded universities in research over a period of 6 years from year 2015 to year 2020. Electronic Engineering of the Chinese University of Hong Kong received 87%, the highest proportion of world leading (4\*) and internationally excellent (3\*) research within the Electrical and Electronic Engineering area in Hong Kong, according to RAE 2020 by the University Grants Committee of Hong Kong.

### 中大研究表現於 2020年研究評審工作獲認同

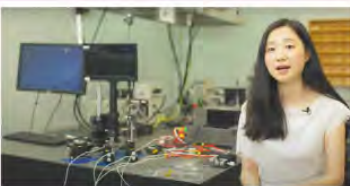
CUHK Research Performances Recognised by RAE 2020

中大獲最多三星及四星評級的研究及比例



## Our Engineering cares neighborhoods 我們的工程關愛社群

We developed wearable blood pressure sensor to provide 24x7 healthcare monitoring services.



View our story



We developed an underground wireless smart drainage system for the Drainage Services Department.



View our story



We developed an A.I. speech recognition APP for speech disorder detection & keeping voices of someone who is losing ability to speak.



View our story



We train you to become a well-rounded engineer

Do you know what "Electronic" meant in Electronic Engineering?

Is it ONLY "Electronic Circuit"? **NO**

### Signal Processing

- Computer Vision / Voice Recognition

### Integrated Circuit

- Semi-Conductor Devices/Arduino / Microcontroller

### Optoelectronics

- Optical Fiber/ Memory/ Communication

### Wearable Devices

- Sensor / Smart Watch

### Biomedical

- Medical Diagnosis

### Artificial Intelligence

- Object Recognition / Deep Learning

### App Development

- IOS / Android App & AR / VR

### Robotics

- Machine Learning

### Solid States

- Solar Cell / Materials / SSD

### Communication

- 5G / Bluetooth / Wifi / RFID / Antenna / Internet of Things

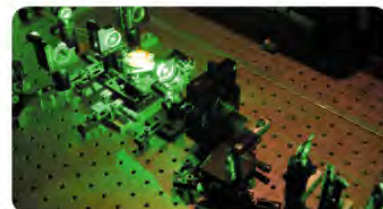
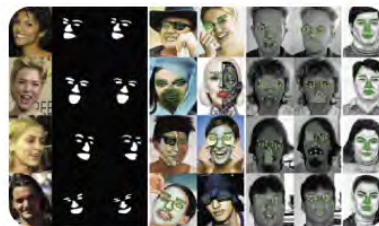
Electronic

## Multimedia Technology 多媒體技術

Digital Entertainment: High Definition Digital TV, Computer Animation & Virtual Reality, Computer Generation of Voice & Music  
數碼娛樂：高清晰度數碼電視；電腦動畫與虛擬真實；  
電腦合成人聲與音樂

Health & Medical: Digital Hearing Aids, Medical Image Processing  
醫療保健：數碼助聽器；醫療圖像處理

Smart City: Autonomous Driving, Forensic Voice Verification, Intelligent Surveillance Vision  
智慧城市：自動駕駛；人聲識別與鑒真；  
智慧視覺保安監控



## Optoelectronics & Optical Communication 光電子與光通信

Optical Communication: Cable TV, Broadband Internet  
光通信技術：有線電視；寬頻網絡

Micro-optics: Optical Memory, LCD Projectors, CCD Camera  
微光米學：光記憶體；液晶投影；CCD攝像機

Integrated Optics: High-Speed Fibre Optic Components  
集成光學：高速光纖器件

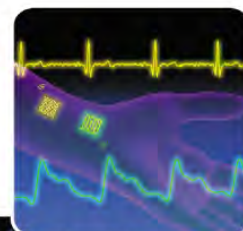
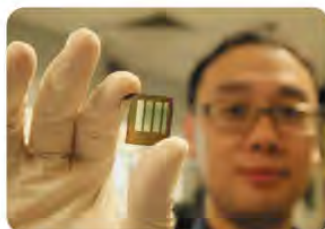


## Semiconductor Devices & Integrated Circuits 半導體器件與集成電路

Mixed Signal Integrated-Circuit Design: Mobile Phone  
混合信號集成電路：流動電話

Smart Cards: Octopus, HKID Card  
智能卡裝置：八達通；身份證

Nano-meter Semiconductor Devices and Materials  
納米半導體器件和材料



## Wireless Technology 無線通信技術

Antenna, Bluetooth, WiFi  
天線；藍牙技術；WiFi

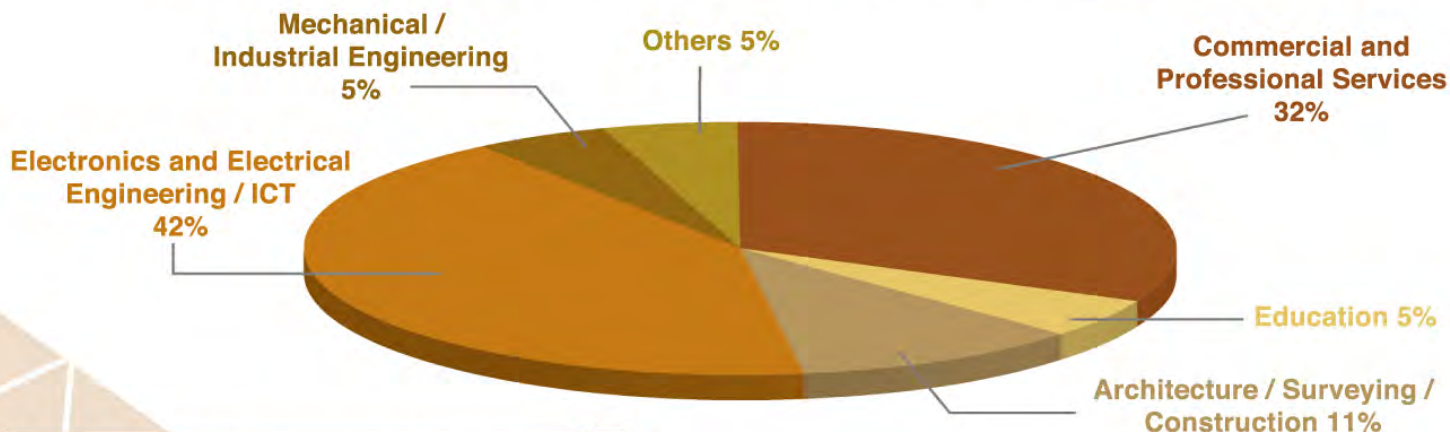
Radio Frequency Identification (RFID) for Logistics  
應用射頻識別技術的物流系統

Wireless LAN  
無線區域網絡

Radio-frequency Radiation Measurement  
無線電波幅射測量



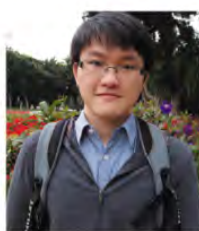
# EMPLOYMENT OF ELECTRONIC ENGINEERING GRADUATES 2022



## Professional Engineers 專業工程人士



**POON Hiu Ching, Peggy**  
Electronics Engineer



**MUI Tin Wai**  
Network Manager (Infrastructure Engineering Control Centre)



**Lee Ho Tin**  
Graduate Trainee



**CHENG Foon Lok**  
Assistant Electronic Engineer



**WONG Chi Wai**  
Assistant Engineer



## Entrepreneurs 企業家



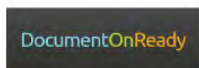
**WONG Wai Kay, Ricky**  
Founder of Hong Kong Technology Venture Company Limited (HKTV & HKTVmall)



**TSANG Wai Wah, Martin**  
CEO and Founder of Halo Energy Limited



**CHEUNG Ka In, Debi**  
Founder of DocumentOnReady



**LI, Linkai**  
Co-founder of Orka Inc.



## Researchers 研究學者



**FOK Mei Po, Mable**  
Professor



**CHOW Chi Wai**  
Professor



**WAI Hoi To**  
Assistant Professor at SEEM Department



**TSANG Sai Wing**  
Associate Professor



## Programme Entrance Requirements 課程入學要求

The JUPAS code of Beng in Electronic Engineering is JS4434. Admission is based on the Best 5 HKDSE subject results with subject weighting. For details of subject weighting, please refer to the table below.

Minimum Admission Requirement	Subject	Minimum Grade	Subject Weighting
Core Subjects	Chinese Language	3	1
	English Language	3	1
	Mathematics	3	1.5
	Citizenship and Social Development	A (Attained)	/
Two Elective Subjects	Any one science subject from the following: Biology/ Chemistry/ Physics/ Information and Communication Technology/ Mathematics Extended Module I or II	3	1 (1.5 for Physics, M1/M2 if applicable)
	All other Elective Subjects		#

# The Programme accepts any one subject as the second elective. The preferred subjects include Physics and Mathematics Extended Module 1 or 2. Subject weighting of 1.5 is given to the preferred subjects; and 1.0 is given to any other subjects. In addition to the requirements above, bonus points will be awarded to the 6th and 7th subjects, if any.

## Admission Scholarships 入學獎學金

The Department of Electronic Engineering offers admission scholarships, on top of those from the University and Faculty, to new undergraduate students on the basis of their excellent academic performance.

Category	Quota	Amount (HKD)
for JUPAS students [1] - Achieve 5** in one or more STEM subjects [2] - Achieve 5* in two or more STEM subjects [3] - Achieve 5* in one STEM subject [3]	100 Students	\$20,000 /student \$10,000 /student \$5,000 /student
Non-JUPAS local students	4 students	\$15,000 /student
International student	1 student	\$100,000

[1] Including the students admitted via the School Nominations Direct Admission Scheme (SNDAS) of that entry year.

[2] Any of the following subjects is considered as a STEM subject: Mathematics (Compulsory Part), Mathematics (Module 1 or Module 2), Physics, Chemistry, Biology, Information and Communication Technology.

[3] Not for students who achieve 5\*\* in at least one STEM subject.

# 電子工程學課程 Electronic Engineering Programme

Room 404, Ho Sin Hang Engineering Building  
The Chinese University of Hong Kong  
Shatin, N.T., Hong Kong

Tel: (852) 3943 8486 / (852) 3943 8448  
Fax: (852) 2603 5558

General Enquiry Email: [eeugadm@ee.cuhk.edu.hk](mailto:eeugadm@ee.cuhk.edu.hk) / [dept@ee.cuhk.edu.hk](mailto:dept@ee.cuhk.edu.hk)  
Homepage: <http://www.ee.cuhk.edu.hk>

