

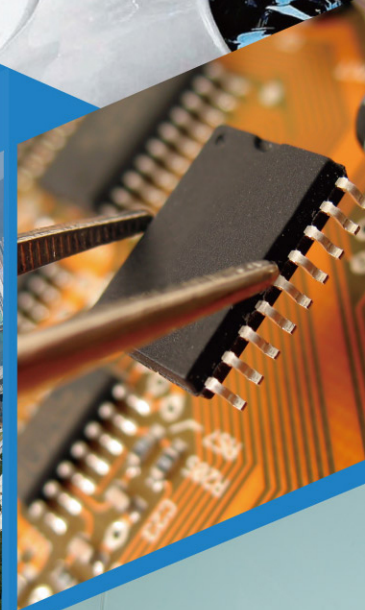


香港中文大學  
The Chinese University of Hong Kong

# Master of Science in Electronic Engineering

## 電子工程學理學碩士

授課式碩士課程



光纖之父 高錕爵士  
Professor Sir Charles K. Kao Father of Fiber Optics

In Fond Memory of  
Prof. Charles K. Kao  
Nobel Laureate 2009 and  
Founding Chairman, EE CUHK



CUHK | Electronic Engineering  
香港中文大學 | 電子工程學系

Our mission is to educate future leaders, innovators and entrepreneurs 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, learning and research, the Department is guided by the highest international standards.



# COURSE LIST

ELEG 5723	CMOS Analog IC Design	ELEG 5756	Intellectual Property Management & Technology Commercialization
ELEG 5724	VLSI Design Methodology & Testing	ELEG 5757	Wearable Electronics
ELEG 5726	Power Management Technology	ELEG 5758	VLSI Digital Signal Processing
ELEG 5731	Wireless Communication Systems	ELEG 5759	Machine Learning for Signal Processing Applications <span>New</span>
ELEG 5732	RF Circuits and Systems	ELEG 5760	Innovation, Technology and Management in Modern Engineering <span>New</span>
ELEG 5741	Digital Processing of Speech Signals	ELEG 5802 <sup>#</sup>	Research and Development Project
ELEG 5742	Image Processing & Video Technology		
ELEG 5743	Advanced Signal Processing for Communications		
ELEG 5752	Metal-Oxide-Semiconductor Devices		
ELEG 5753	Flexible Electronics and Solar Cell Technology		
ELEG 5754	Solid-state Sensors and Lighting Systems		
ELEG 5755	Optical Communication and Interconnects		

Students, subject to approval, can also elect the following graduate courses primarily for research students:

- ELEG 5280 Analog-Digital ASIC Design
- ELEG 5301 Photonic Integrated Circuits
- ELEG 5491 Introduction to Deep Learning
- ELEG 5600 Advanced Perception for Intelligent Robotics

<sup>#</sup> Required course (applicable to students admitted in 2020-21 and thereafter)

- ▶ Each year, a balanced set of courses will be offered from the above list. Students will also be able to take courses designed for research postgraduate students and from other programmes, including those offered by other engineering departments and the Business School, subject to prior approval.
- ▶ These courses attempt to stimulate students' interest in and equip them with a greater command of emerging technologies such as artificial intelligence, big data analytics, future IOT applications, advancement of renewable energy, smart materials, etc.
- ▶ Through interactive teaching and learning we guide our students to get better understanding of the fundamental concepts, to be able to identify and resolve problems, as also to be motivated to innovate new applications across different domains.
- ▶ Students will engage with our research laboratories, working with research postgraduate students on a specific engineering project under the supervision of a faculty member and a dissertation is required at the end of the course.
- ▶ Industrial lecture series and company visits will also be organized for our MSc students.



# THE PROGRAMME

- ▶ A student must take and pass 8 courses including a required dissertation in this programme with a GPA of 2.0 or above to graduate.
- ▶ A student will be discontinued from study if the student has a GPA below 1.0 or fails to have probation lifted after being put on academic probation for two consecutive terms of attendance.
- ▶ The length of study is usually 1 academic year in full-time mode and 2 academic years in part-time mode. Each year has 2 terms.
- ▶ All the lecturing courses are conducted in English. Each course usually consists of 36 lecture hours and a number of tutorials/hand-on training sessions over a period of 14 weeks.
- ▶ Subject to the approval of the Programme Directors concerned, students can take at most two courses from other M.Sc. Programmes within the Faculty of Engineering, or other courses as deemed appropriate.
- ▶ Full-time mode students are allowed to take other day time postgraduate courses offered by the Department of Electronic Engineering.

## AWARD OF DEGREE

Graduates will receive a Master of Science Degree in Electronic Engineering from The Chinese University of Hong Kong if satisfy the credit unit and GPA requirements.

## VENUE & FACILITIES

The classes will be held in weekday evenings in the University campus in Shatin. Through application, students can use various facilities and service in the Department of Electronic Engineering, and the University, e.g. computer laboratory and the University Library services.

## ENTRY REQUIREMENTS

- ▶ A bachelor degree in Electrical Engineering, Electronic Engineering, Information Engineering and Computer Engineering may be admitted to this Programme.
- ▶ Students with a first degree in other fields such as Physics and Mechanical Engineering may also be considered provided that they have some experience and background in electronic engineering.
- ▶ The entry requirements of the Graduate School must also be satisfied.
- ▶ All students should fulfil the English Language Proficiency Requirement prescribed by Graduate School before they are admitted.

For more information, please visit the following websites:

MSc Programme: <http://www.ee.cuhk.edu.hk/en-gb/curriculum/msc-programme/admission>

Graduate School: <https://www.gs.cuhk.edu.hk/admissions/admissions/requirements>

## TUITION FEE (PROVISIONAL)

Full Time mode: HK\$150,000 for the whole programme (including 8 courses), HK\$6,250 per unit.

Part Time mode: HK\$150,000 for the whole programme (including 8 courses), HK\$6,250 per unit.

## APPLICATION PROCEDURES

Applications will be processed on a first-come-first-served basis, the majority of offers will be made in early rounds. The number of places is limited, interested applicants should consider early submission of their applications.

Full-time mode admission: September

Part-time mode admission: September & January (provisional)

## APPLICATION DEADLINE\*

1st round admission: 23 November 2020

2nd round admission: 28 December 2020

3rd round admission: 5 February 2021

\*For the latest application deadline, please refer to MSc Programme's webpage:  
<http://www.ee.cuhk.edu.hk/en-gb/curriculum/msc-programme/admission>.



To apply through Internet, please visit the Graduate School's website:  
<https://www.gs.cuhk.edu.hk/admissions/admissions/how-to-apply>.





# CIRCUITS & SYSTEMS GROUP

- ▶ Microwave & Wireless Communications
- ▶ VLSI & ASIC
- ▶ Energy Conversion



# MULTIMEDIA & SIGNAL PROCESSING GROUP

- ▶ Image and Video Processing
- ▶ Signal and Data Science



# ROBOTICS, PERCEPTION & AI GROUP

- ▶ Robotics with Medical, Service, and Industrial Applications
- ▶ Perception, Sensors and Computer Vision
- ▶ AI, Pattern Recognition, and Human Machine Interaction
- ▶ Intelligent and Integrated Systems



# SOLID STATE ELECTRONICS & PHOTONICS GROUP

- ▶ Photonics & Optical Communications
- ▶ Solid-State Electronics





# STUDENT SHARING



## Shum Tak Lok, Samuel 沈德諾

M.Sc. (EE) 2019

Engineer, Hong Kong Applied Science & Technology Research Institute Co. Ltd. (ASTRI)  
2019 Bright Future Scholarship awardee

Currently, I am working in a research institute in HK. The academic qualification is the major concern in my job. At the beginning, I just see this MSc programme offered by the Department of Electronic Engineering in CUHK as a steppingstone of my career success. And I don't care about the interest of the course subject or the course grade. However, this concept is totally changed when I finished my first course called the Power-Management Technology. In this course, Prof. Leung can make use of the examples in daily life to explain some complex concept. This kind of teaching style has inspired my change in the pursuit of learning attitude, which is of great benefit to my future research work.

In this MSc course, I have not only learnt many hard knowledges such as tele. communication, deep learning and IC design etc., but also have learnt some soft skills taught by a course called the Innovation, Technology and Management in Modern Engineering. For example, I learn how to understand and cultivate myself, and how to deal with the problems. Also, from the guest lecture provided by the CEO and Entrepreneur, I learn the path to success from their experience.

In conclusion, this MSc course is a comprehensive help for my future development.



## Xin Yi 辛毅

M.Sc. (EE) 2018

Application Engineer Trainee Program, Maxim Integrated, Inc.  
2017 Department Admission Scholarship and  
2018 Department Graduation Scholarship awardee

After I received my bachelor's degree in Fudan University, I chose MSc Electronic Engineering programme offered by the Department of Electronic Engineering, CUHK.

This programme provided a solid background for my career development. A series of excellent courses, such as CMOS Design and Power Management, have helped me build a requisite stock of knowledge. This programme also has strong teaching staff and a broad connection with industry. A lot of company-visiting activities and academic lectures have endowed me with both a global career outlook and a professional perspective to tackle the existing problems in the field of Electronic Engineering.

If you choose this programme, what you will obtain from this program will be beneficial to your academic and career pursuit definitely.



## Yang Yuren 楊裕仁

M.Sc. (EE) 2016

Co-founder of the Shadow Express Electronic Commerce (Hong Kong) Co., Ltd  
Co-founder of the Olympics Technology Ltd

I received bachelor's degree from the School of Electronic and Engineering of Nanjing University, and then went to the Chinese University of Hong Kong to pursue a M.Sc. degree in Electronic Engineering. During the period, I took part in the development of intelligent hardware called Ensa by using the knowledge and teacher's guidance in the classroom. I founded the Olympic Science and Technology Co., Ltd. and obtained the offer of Hong Kong Science Park incubation. After graduation, he founded the Shadow Express Electronic Commerce (Hong Kong) Company Limited and participated in research and development of Shadowbox in order to make Hong Kong's logistics industry more efficient and convenient.

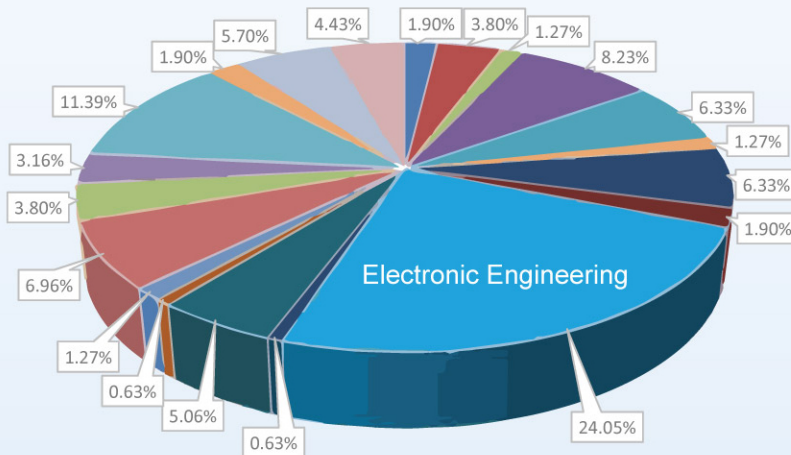
During my master's studies, I not only learned the most professional electronic knowledge of solid-state sensors and lighting systems, wearable bioelectronics, power management ICs, but also I get help from my teachers and classmates. In the Department of Electronic Engineering, the Chinese University of Hong Kong, your friends and teacher will be your life's wealth.



# CAREER

A degree of Master of Science in Electronic Engineering provides a solid foundation to launch your career locally or globally with excellent prospects in a wide range of technological sectors, which include: Data Communication & Network, Software Design & Development, Product Design, Data Science, Artificial Intelligence, Investment Bank, etc. Some of our graduates join the famous enterprises, like HUAWEI, Alibaba, SUNING, Deloitte, etc. The others pursue further studies in CUHK or other universities.

Employment of Msc Graduates up to 2019



- Accounting / Auditing
- Administration / Management
- Sales & Marketing
- Architecture / Surveying / Construction
- Banking / Finance
- Software Design & Development
- Computer Engineering
- Customer / Legal Services
- Telecommunication
- Data Communications & Network / Internet Engineering
- eBusiness / Trading
- Scientific & Research Work
- Electronic Engineering
- Hardware Construction & Installation
- Teaching
- Information Technology Consulting
- Logistics & Supply Chain Management
- Others
- Mechanical Engineering
- Product Design Engineering

## M.SC. SCHOLARSHIPS

### (a) Admission Scholarships

Several scholarships will be awarded to newly admitted students with exceptional academic standing.

- (I) Department Admission Scholarships
- (II) George Chung Scholarship for M.Sc. in Electronic Engineering
- (III) Victor Ng Scholarship for M.Sc. in Electronic Engineering

### (b) Graduation Scholarships

Students with outstanding academic performance during their course of study of the MSc Programme in Electronic Engineering will be awarded one of the following Graduation Scholarships.

- (I) Department Graduation Scholarships
- (II) Bright Future Charitable Foundation Scholarship for M.Sc. in Electronic Engineering
- (III) Certificate of Merits



### ENQUIRIES

**Address:** Division of Electronic Engineering  
(MSc in Electronic Engineering)  
Room 404, Ho Sin Hang Engineering Building,  
The Chinese University of Hong Kong,  
Shatin, HKSAR, China

**Tel:** (852) 3943 8249

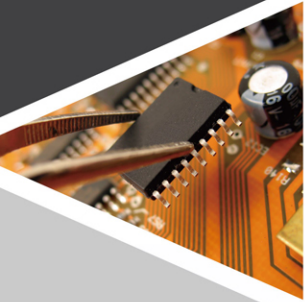
**Email:** [mascinfo@ee.cuhk.edu.hk](mailto:mascinfo@ee.cuhk.edu.hk)

**Website:** <http://www.ee.cuhk.edu.hk>





# 电子工程学理学硕士 授课式硕士课程 Master of Science in Electronic Engineering



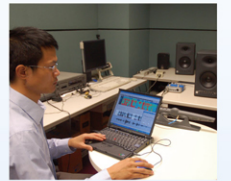
## 课程主任(程伯中教授)寄语

香港中文大学电子工程学系由「光纤之父」，已故诺贝尔物理奖获得者高錕教授创办，并逐步发展成为现在的中文大学工程学院。本系目前有22名教授，其中包括8名IEEE院士(Thierry BLU教授，程伯中教授，马荣健教授，孟庆虎教授，曾汉奇教授，吴克利教授，许建斌教授，于明教授)，在多项前沿科研领域中如先进数字信号处理、图像与视频、微波与无线通信、超大规模集成电路和专用集成电路、能量转换、光电子与光通信技术、固态电子等等，均享有世界顶尖地位极高的国际声誉。我们以建设世界一流电子工程学科为目标，培养国际优秀电子工程领袖人才，科研创业者为使命。



## 课程简介

本课程包括但不限于：科技与工程管理、人工智能及大数据分析图像处理与视频技术、语音数字信号处理、光纤通信、无线通信、光电子学与光子器件、固态电子、VLSI集成电路等。全日制学生的修课期为1年，兼读制为2年，每年有2个学期。整个课程共需修读8门课（共24学分），2020-21及以后入学的学生须包括一门必修的毕业论文。



课程理论与实践并重，极具挑战性，提升同学在不同电子工程范畴中解决问题的能力，培养多角度思维，启发跨领域的创新。



全日制学生：9月入学 / 兼读制学生：9月及1月入学（暂定）  
学费（暂定）：  
全日制学生：HK\$ 6,250 /学分，整个课程共HK\$ 150,000。  
兼读制学生：HK\$ 6,250 /学分，整个课程共HK\$ 150,000。

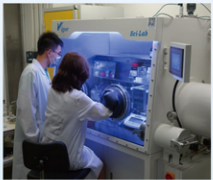
## 申请手续

申请截止日期（暂定）：第一阶段为2020年11月23日，第二阶段为2020年12月28日，第三阶段为2021年2月5日。请留意电子工程学系主页<http://www.ee.cuhk.edu.hk>公布的最新申请截止日期，以及其他与申请相关的讯息。



## 课程奖学金 一 奖励求知，激发潜能

- 入学奖学金：本课程将颁发多个“入学奖学金”予本科成绩优异的新生。
- 毕业奖学金：每年多名成绩卓越，且GPA达到3.5或以上，或在理学硕士课程论文中取得优秀的学术成就的应届优秀毕业生，将可获得毕业奖学金。



## 联系方式

地址：中国香港特别行政区  
新界沙田 香港中文大学  
何善衡工程学大楼404室 电子工程学系  
电话：(852) 3943 8249  
电邮：mscinfo@ee.cuhk.edu.hk  
网页：<http://www.ee.cuhk.edu.hk>