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

MSc GRADUATION DINNER

MSc INAUGURATION CEREMONY

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

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

ANNIVERSARY
50th

香港中文大學電子工程學系
DEPARTMENT OF ELECTRONIC ENGINEERING OF CUHK

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	Innovation, Technology and Management in Modern Engineering `New`
ELEG 5732	RF Circuits and Systems	ELEG 5760	Machine Learning for Signal Processing Applications `New`
ELEG 5741	Digital Processing of Speech Signals	ELEG 5761	Power Converters and Their Grid Applications `New`
ELEG 5742	Image Processing & Video Technology	ELEG 5802#	Research and Development Project
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

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 motived 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.

Industrial Visits and Seminars

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: 18 October 2021
2nd round admission: 22 November 2021
3rd round admission: 23 December 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
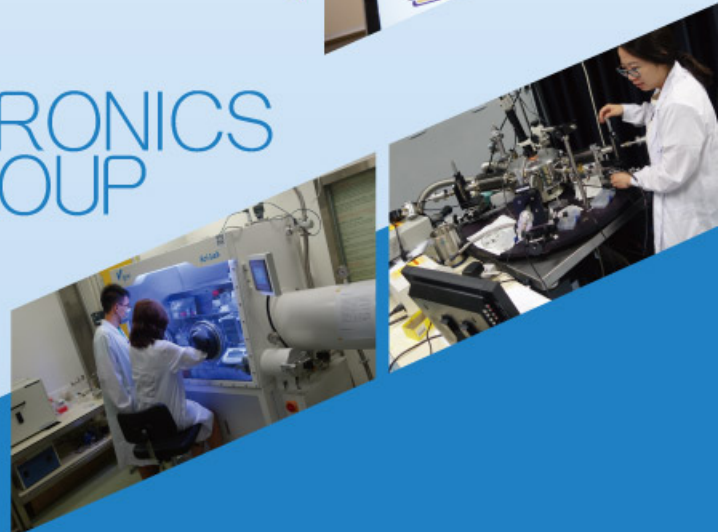
Shum Tak Lok, Samuel 沈德諾

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.

Tao Dehua 陶德华

M.Sc. (EE) 2017
Ph.D. student (EE) current

When looking back to the experience in the M.Sc. programme, I realize what I learned in that year has laid the foundation for my current study and life. I first learned about the Automatic Speech Recognition (ASR) in the Digital Processing of Speech Signals course and Deep Neural Network models in the Introduction to Deep Learning course. The knowledge I learned in these courses is still helpful for my current research work. The programme offers various courses involving different domains, like speech, image, circuit, etc. These diverse courses can help us to open the mind and find the direction we are interested in.

In addition to the courses, the programme also provides opportunities for students to develop research projects under the supervision of professors in the EE department. I chose a project of ASR application. While completing the project, I learned how to do research and found that ASR techniques interested me. Therefore, I stayed in the DSP lab to do the research related to ASR techniques as the Research Assistant after graduating from the M.Sc. programme. While working as RA, I prepared myself and decided to pursue a Ph.D. degree for further studies.

Lastly, I would like to thank the M.Sc. programme for providing a good platform for growing and discovering my potential.

Yang Yuren 楊裕仁

M.Sc. (EE) 2016
Co-founder of the Shadow Express Electronic Commerce (Hong Kong) Co., Ltd
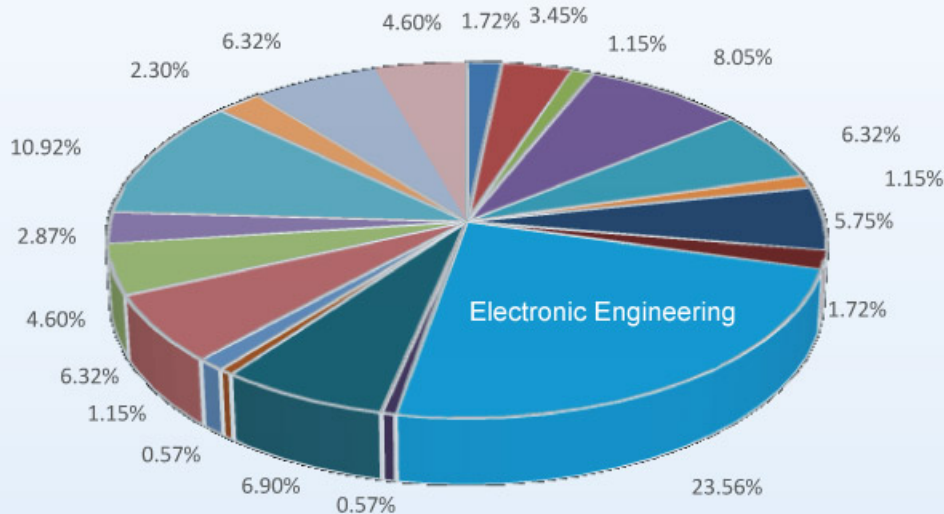Co-founder of the Olympics Technology Ltd

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, Deloitte, etc. The others pursue further studies in CUHK or other universities.

Employment of Msc Graduates up to 2020

Pie chart values: 4.60%, 1.72%, 3.45%, 6.32%, 1.15%, 8.05%, 2.30%, 6.32%, 10.92%, 1.15%, 2.87%, 5.75%, 4.60%, 1.72%, 6.32%, 1.15%, 0.57%, 6.90%, 0.57%, 23.56%

Center label: Electronic Engineering

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

M.SC. SCHOLARSHIPS

Admission Scholarships
Several scholarships will be awarded to newly admitted students with exceptional academic standing.
▶ Department Admission Scholarships

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.
▶ Department Graduation Scholarships
▶ Bright Future Charitable Foundation Scholarship for M.Sc. in Electronic Engineering
▶ Hamen Fan Scholarships for M.Sc. in Electronic Engineering
▶ Dr. Raymond Leung Scholarship for M.Sc. in Electronic Engineering
▶ Certificate of Merits

CUHK
Electronic Engineering

香港中文大學
The Chinese University of Hong Kong

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

高锟教授
2009年诺贝尔得奖者
永远怀念您

课程主任(李鸿升教授)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锟教授创办，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、人工智能、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，均享有国际领先的学术声誉。我们以建设世界一流电子工程学科为目标，以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项目课程。

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，启发跨领域的创新能力。

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2021年10月18日，第二阶段为2021年11月22日，第三阶段为2021年12月23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。

中大研究表现於
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

工程學 Engineering	電機及電子工程 Electrical and Electronic Engineering	法律 Law	教育 Education
94%	87%	83%	68%

课程奖学金 — 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当届优秀毕业生，将可获得毕业奖学金

前程锦绣

本系为学生提供了广阔的深造就业平台，优秀毕业生去向包括：ASTRI，Solomon，Nuvoton，Xeno Dynamics，Maxim Integrated，网易，华为等知名企业。

联系方式

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电邮：mscinfo@ee.cuhk.edu.hk
网页：http://www.ee.cuhk.edu.hk

50th ANNIVERSARY

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DEPARTMENT OF ELECTRONIC ENGINEERING OF CUHK