Master of Science in Electronic Engineering

ENTRY REQUIREMENTS

Students with 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 entrance requirements of the graduate school must also be satisfied.

We also welcome non-local applicants. All admitted non-local students must obtain a student visa or entry permit for entering Hong Kong for the purposes of education.

All students should fulfill the English Language Proficiency Requirement prescribed below before they are admitted:
(a) possess a pass grade in English in one of the following examinations:
  - Hong Kong Advanced Level Examination (AS Level);
  - Hong Kong Higher Level Examination;
  - CUHK Matriculation Examination;
  or
(b) achieve Level 4 or above in the English Language subject of the Hong Kong Diploma of Secondary Education (HKDSE) Examination;
(c) have a degree from a university in Hong Kong or an English-speaking country; or
(d) achieve the specified scores in the following tests by submitting one of the following original score reports/certificates for assessment by the programme(s) concerned:
  - TOEFL(3) (Paper-based: 550; Computer-based: 213; Internet-based: 79);
  - GMAT (verbal) (Band 21);
  - IELTS(4) (Academic) (Band 6.5);
  or
(e) have obtained a recognized professional qualification awarded in Hong Kong or an English speaking country.

TUITION FEE (provisional)

The whole programme consists total 8 courses (24 units).

Tuition Fee: HK$5,208 per unit (provisional)

Payment:
Full-time mode: paid by 2 installments
Part-time mode: 6 units (1st installment). Future installments will be paid in terms of the number of courses taken by the student.

APPLICATION PROCEDURES

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

Application deadline:
1st round admission: 16 December 2014
2nd round admission: 26 January 2015

Please refer to the Department's website http://www.ee.cuhk.edu.hk/ for the latest application deadline.

To apply through Internet, please visit the Graduate School’s website http://www2.cuhk.edu.hk/gsa/. All application materials including the original transcripts should reach our office by the application deadline.

ENQUIRIES

Address: Department of Electronic Engineering, Room 401, Ho Sin Hing Engineering Building, The Chinese University of Hong Kong, Shatin, HKSAR, China
Tel: (852) 3943 8368 or (852) 3943 8274
Fax: (852) 2603 5558
Email: mscmb@ee.cuhk.edu.hk
Website: http://www.ee.cuhk.edu.hk/

M.S.C. SCHOLARSHIPS

ADMISSION SCHOLARSHIP

A limited number of "Admission Scholarship" will be awarded to newly admitted students with exceptional academic standing. The awardee will have half of the tuition fee waived.

ACADEMIC SCHOLARSHIP

Top two students of MSc Programme in Electronic Engineering in a year graduated with outstanding academic performance will be awarded Academic Scholarships of HK$20,000 and HK$15,000 respectively.
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THE DEPARTMENT

The history of our department precedes the Faculty of Engineering. Its rich history has enabled the department to excel in all fronts. Over the past 44 years, we have nourished more than 3,500 graduates. Many of them are now in influential positions in their professions. We have been very successful in securing research funding to boost our research personnel to over 110 postgraduate students and 70 research staff.

Our staff maintains a good record of awards and decorations. First and foremost is the Nobel Prize awarded to our Founding Chairman Professor Charles Kao in 2009. Our present Chairman Professor H.K. Tsang received the Research Excellence Award in 2007. Professor J.B. Xu received the Joint Research Fund for Overseas Chinese, Hong Kong and Macau Scholars funded by NSFC in 2009. Professor Y.T. Zhang won the Hong Kong ICT Gold Award in 2008. Professor K.L. Wu invented the first ever smallest Bluetooth module in 2005. We have six IEEE Fellows among us and our staff received Best Paper Awards in numerous occasions.

OUR EMPHASSES

Continuous professional development is essential to electronic engineers to open new doors and to excel at work. This is what we want to offer in our Master’s Degree programme. Success means not only to drive your career forward, but as proven by our Founding Chairman, Professor Charles Kao, to win world accolade as a Nobel Laureate.

Today’s electronic engineers face many new challenges. Many new applications require multi-disciplinary skill. More than just conventional electronics, one needs to understand optics, solar technology and nano devices etc. There is a paradigm shift in design considerations. Cost effectiveness and high performance are no longer the only concerns. Engineers are asked to grasp issues like green regulations and carbon emission factor, etc. Added to all this, there is a trend of moving from electrons to photons in order to maintain the accelerating speed in computing and communication.

This is why we are offering a programme which is wide in coverage and allows students to choose freely according to their aspirations and interests.

We also offer opportunities for students to engage with our research laboratories on a voluntary basis or through subscribing a project course.

THE COURSES

The programme includes advanced subjects in areas of solid-state devices, photonics, fiber network, video technology and VLSI:

- ELEG5722 CMOS Digital IC Design
- ELEG5723 CMOS Analog IC Design
- ELEG5724 VLSI Design Methodology & Testing
- ELEG5726 Power Management Technology
- ELEG5731 Wireless Communication Systems
- ELEG5732 RF Circuits and Systems
- ELEG5741 Digital Processing of Speech Signals
- ELEG5742 Image Processing & Video Technology
- ELEG5743 Advanced Signal Processing for Communications
- ELEG5751 Optoelectronics and Optical Communication
- ELEG5752 MOS Devices & Fabrication
- ELEG5753 Flexible Electroncics and Solar Cell Technology
- ELEG5754 Solid-state Sensors and Lighting Systems
- ELEG5755 Optical Communication and Interconnects
- ELEG5756 Intellectual Property Management & Technology Commercialization
- ELEG5757 Wearable Bioelectronics
- ELEG5802 Research and Development Project
- ELEG5901 Management Techniques for Engineers

Each year, a balanced set of courses will be offered from the above list. Students will also have option to take courses designed for research postgraduate students and from other programmes.

THE PROGRAMME

A student must take and pass 8 courses 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.

Each course usually consists of 36 lecture hours and 6 hours of tutorials/hand-on training over a period of 14 weeks.

Subject to the approval of the Programme Directors concerned, students can take at most 2 courses from other M.Sc. Programmes within the Faculty of Engineering.

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 requirement.

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.

STUDENT SHARING

Xia Qijie — M.Sc. EE (2013), admitted to Ph.D. (EE) at CUHK
I applied to the M.Sc. programme offered by the Department of Electronic Engineering, the Chinese University of Hong Kong, after I have obtained the bachelor degree in the South China Normal University. CUHK provides students with comfortable learning environment and advanced facilities. What’s more, its curriculum contains myriad informative courses, covering optical communication, solid state, integrated circuit and image processing, interactive class mode between professors and students helped effective learning and all kinds of projects facilitated me to turn what I have learnt in class into reality. Because of my interest in optical communication, I decided to pursue the Ph.D. degree in the Electronic Engineering Department, after completion of my M.Sc. programme.

Marco Ho — M.Sc. EE (2009), Ph.D. EE (2012), Postdoctoral Fellow at CUHK-EE
After I obtained my undergraduate degree in Canada, I returned to Hong Kong to work. When I decided to shift my focus from software programming to hardware engineering, I chose the M.Sc. programme offered by the Department of Electronic Engineering in the Chinese University of Hong Kong. Its curriculum encompasses the wide variety of advanced technologies, from optical communications to integrated circuit designs, from multimedia signal processing to solid-state fabrications. It provides me with multi-faceted aspects and interdisciplinary exposures. It was during this programme that I found my enthusiasm in power-management integrated circuits, and after I completed the M.Sc. programme, I stayed in the Department to pursue my Ph.D. degree.