

# Programmes

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## BEng (Hons) in Electronic and Communication Engineering (Full-time)

電子及通訊工程學榮譽工學士(全日制)

- [Applic](#)
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**Application period for direct applicants: 8 Dec 06 - 28 Feb 07**

Programme code: **BEECE**

Full-time: **3 years**

JUPAS code: **15**

Programme Leader:

Dr. W S Chan

Associate Programme Leader:

Dr. Andy H P Chan

Programme email address:

[ecepl@ee.cityu.edu.hk](mailto:ecepl@ee.cityu.edu.hk)

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### Programme Aim

We aim to provide you with a solid education in electronics and communications, so that at graduation you will be prepared for employment in the Hong Kong and Asia-Pacific technology industry. Our education will transform you into a well-trained professional engineer with the skills and knowledge to enable you to progress further in this rapidly changing high-tech industry. The content covered will also equip you to pursue postgraduate studies.

本課程旨在為電子及通訊業培育專業工程師，學生將具備專業技術和視野，並能設計及應用不同通訊系統，迎接新科技帶來的挑戰。

### Career Prospect

In 2003, **electronics industry accounted for 42% of Hong Kong's total exports.** In m

China, electronics has now become the largest industry with an annual growth of around 20%. China is also the No.1 market in cellular phones and various kinds of electronic products.

- **Our Graduates**

Since its establishment in 1984, the Department has graduated 5,044 students at different levels. They are able to excel in different sectors including government, education, industry and manufacturing, as well as commerce and business. Click [here](#) for **Comments from Graduates**.

- **Job Nature of Graduates**

Telecommunication Engineers, Electronic/Electrical Engineers, Product and System Design, Hardware Engineers, Software Engineers, Computer Programming, System Analysts, Production and Manufacturing, Sales and Marketing, Research and Development, etc.

- **Graduate Employment Survey 2005**

93% of graduates were engaged within a few months after graduation, of whom 8% pursued further studies. Click [here](#) for details.

## Programme Features

The curriculum is structured as shown in the figure below. The first two years focus on the fundamental core aspects of electronic and communication engineering: (1) Electronic Circuit Design; (2) Microprocessors and Computer Control; and (3) Communication Engineering.

In the third year, students are allowed to specialize in different areas of interest. Students have flexibility to design their own studies by selecting elective courses on Advanced Control Systems, Communications Engineering, IC Design, Industrial Electronics, Optoelectronics, Signal Processing, and Computer Vision.

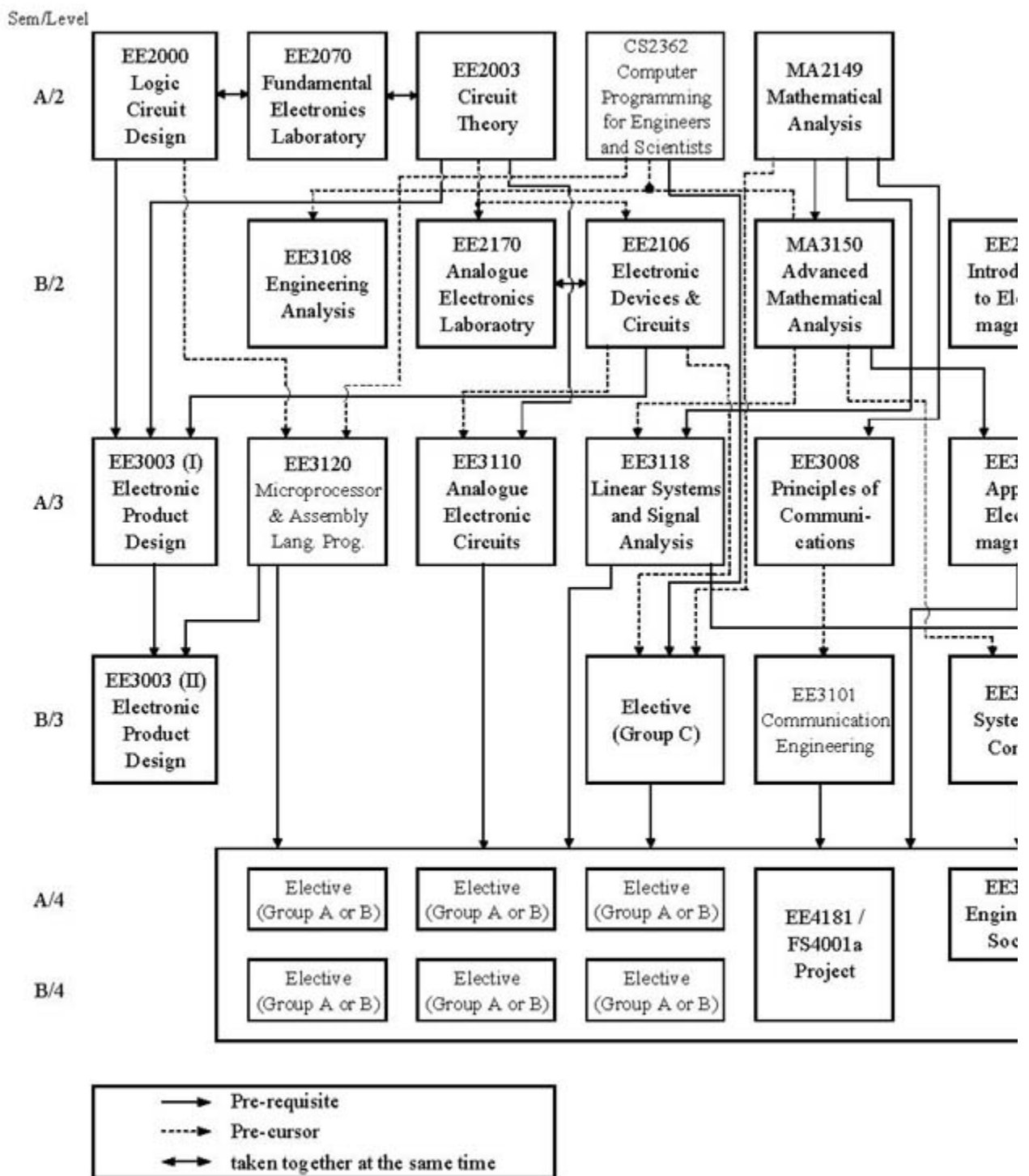
## Curriculum Structure







## Programme Structure of BEng(Hons) in Electronic and Communication Engineering



### Remarks:

- 1/ Apart from the above courses, students are required to take EE4093 Basic Training I and EE4094 Basic Training II in Year 1 and 2 summer respectively. Students should also fulfill 6 credits of University Language Requirement, 6 credits of Out-of-Discipline courses and 6 credits of Chinese Civilization.
- 2/ For detailed course descriptions, please refer to the departmental website: <http://www.ee.cityu.edu.hk>

## Professional Recognition

The programme has been accredited by the [Hong Kong Institution of Engineers](#), one of the requirements for obtaining Charter status. Based on the Washington Accord, graduates receive reciprocal recognition from the equivalent bodies in Australia, Canada, Israel, New Zealand, Africa, the UK and the USA.

## Bonus Features

### Industrial Attachment Scheme

Want to get a head start for your career? Through tailor-made training programmes carefully worked out between professors and partner companies, students can gain working experience and insight into the functioning of corporations before graduating. This greatly enhances graduates' career prospects.

### Co-operative Education Scheme (CES)

The CES is a 9 to 12-month placement programme for final year science and engineering students. During this placement period, students are released by the partner companies to attend classes. In many cases, students were even offered jobs by the training companies immediately after the placement.

### Student Exchange

The Department strongly supports [student exchange](#) as a way for students to broaden their horizons and enhance life experience. In 2005/06, some 12 students will embark on exchange programmes at prestigious universities in USA, Canada, UK, France, Singapore and China. Starting from 2003, students have been able to secure funding from the Government to participate in the [IT Exchange Programmes](#) in USA, UK and Australia.

.....[More](#)

### Scholarships

Building on our strong link with industry, many scholarships are offered to students every year.

.....[More](#)

### Student Achievements

CityU's Electronic Engineering students win almost all top prizes in the annual open project competitions organized by the Institution of Electrical Engineers (IEE) and other professional bodies. Join us and you can become a winner too! Click [here](#) for more information.

### Teaching Quality

Five of our professors have been awarded CityU's Teaching Excellence Awards since its inception in 1994. CityU-EE also received highly favourable comments from the University Grants Commission.

2003 Teaching and Learning Quality Process Review.

## Entrance Requirements and Admissions

### Hong Kong Advanced Level Examination Qualifications

Apart from meeting the University's language proficiency requirements (English and Chinese language), students must satisfy the following requirements for the purpose of admission:

E or above in A-level **Applied Mathematics or Pure Mathematics or Physics or Engineering Science PLUS** one of the following requirements:

- E or above in one other A-level subject; or
- E or above in two AS-level subjects (excluding AS-level Use of English, and Chinese Language and Culture)

### Direct Applicants

A higher diploma or associate degree in an engineering or a science discipline; or an equivalent qualification.

Click [here](#) for articulated higher diploma programmes.

*Credit Transfer: Credit transfer may be granted upon admission for articulated higher diploma programmes. Successful applicants may also apply for credit transfer for particular courses on which they have registered. Any credits awarded will contribute to the total required for the award of an honours degree.*

### Admissions

Application materials are available:

- Click [here](#) for online application (Application fee HK\$100)
- Click [here](#) for the hard copy application form and application guide (Application fee HK\$200)
- At the Distribution Counter located at the University Concourse, Floor 4, Academic Building, (Mon to Fri: 9:00am – 6:00pm; Sat: 9:00am – 1:00pm)

### Articulated Higher Diploma Programmes

The following articulations are applicable to the 2007 HD graduates.

### HK Institute of Vocational Studies at Haking Wong

1. Higher Diploma in Electrical Engineering

### HK Institute of Vocational Studies at Kwun Tong

1. Higher Diploma in Entertainment Electronics
2. Higher Diploma in Computer and Information Engineering [2006 Graduates]

### HK Institute of Vocational Studies at Shatin

1. Higher Diploma in Computer and Information Engineering [2006 Graduates]
2. Higher Diploma in Electronic and Communications Engineering [2006 Graduates]
3. Higher Diploma in Electronic Engineering with Business Management
4. Higher Diploma in Internet & Multimedia Engineering

### HK Institute of Vocational Studies at Tsing Yi

1. Higher Diploma in Electrical Engineering
2. Higher Diploma in Intelligent Buildings and Automation Engineering
3. Higher Diploma in Telecommunications and Networking (3-Year)
4. Higher Diploma in Telecommunications and Networking (2-Year)

### HK Institute of Vocational Studies at Tuen Mun

1. Higher Diploma in Telecommunications and Networking (3-Year)

### The Hong Kong Polytechnic University

1. Associate Degree in Engineering ( Subject to approval )
2. Associate Degree in Information Technology ( Subject to approval )
3. Higher Diploma in Electrical Engineering
4. Higher Diploma in Electronic and Information Engineering

## Programme Details

### Programme Requirements

Normal Duration: 3 years	
	Credit Units (CUs)
Core Courses	57 <sup>1</sup>
Group A & B Elective Courses	18 <sup>2</sup>
Group C Elective courses	3
University Language Requirements	6
Chinese Civilization	6
Out-of-Discipline courses	9 <sup>3</sup>

<b>Total</b>	<b>99</b>
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<sup>1</sup> Including EE4093 and EE4094 Basic Training I & II, which carry no credit unit.

<sup>2</sup> At least 15 CUs must be obtained from Elective Group A.

<sup>3</sup> Any Level 2 or above courses except for courses in the disciplines of electronic engineering, computer science, computer engineering, and information/multi-media/web-based technology.

### Core Courses: 57 Credit Units

Course Code	Course Title	Credit Units
EE2000	Logic Circuit Design	3
EE2003	Circuit Theory	3
EE2070	Fundamental Electronics Laboratory	1
EE2104	Introduction to Electromagnetics	3
EE2106	Electronic Devices & Circuits	3
EE2170	Analogue Electronics Laboratory	1
CS2362	Computer Programming for Engineers and Scientists	3
MA2149	Mathematical Analysis	3
EE3003	Electronic Product Design	2
EE3008	Principles of Communications	3
EE3014	Engineers in Society	2
EE3101	Communication Engineering	3
EE3108	Engineering Analysis	3
EE3109	Applied Electromagnetics	3
EE3110	Analogue Electronic Circuits	3
EE3114	Systems & Control	3
EE3118	Linear Systems and Signal Analysis	3
EE3120	Microprocessor & Assembly Language Programming	3
MA3150	Advanced Mathematical Analysis	3
EE4093	Basic Training I	0
EE4094	Basic Training II	0
EE4181/ FS4001a	Project/ Co-operative Education Scheme: Final Year Project Component	6

### Elective Courses: 21 Credit Units

Students are required to take technical elective courses of at least 21 CUs where at least 15 must be obtained from Group A. Students are also required to obtain up to 3 CUs from Group B.

***Group A: Electronic and Communications Related Technical Electives - Students are required to take at least 5 electives from this group, where no more than two Level 1 elective courses should be taken.***

Course Code	Course Title	Credit Units
EE3015	Computer Networks	3

EE3016	WANs & Communication Protocols	3
EE4015	Digital Signal Processing in Communications	3
EE4035	Optical Communications	3
EE4036	Wireless Communications	3
EE4045	Computer Controlled Systems	3
EE4047	Genetic Algorithms and Their Applications	3
EE4101	Modern Power Electronics	3
EE4115	Audio-Visual Engineering	3
EE4142	Guided Wave Optoelectronics	3
EE4143	Audio-Visual Circuit Techniques	3
EE4146	Industrial Electronics	3
EE5413	Advanced Internet Technologies	3
EE5430	Advanced CMOS Technology	3
EE5601	Radio Frequency and Microwave Techniques	3
EE5602	Active Radio-Frequency and Microwave Techniques	3
EE5603	Passive Radio Frequency and Microwave Techniques	3

**Group B: Other Technical Electives**

Course Code	Course Title	Credit Units
EE4206	Digital Image Processing	3
EE4208	Engineering Techniques for Computer Graphics	3
EE4209	Digital Audio Technology	3
EE4210	Neural Networks and Fuzzy Systems	3
EE4211	Computer Vision	3
EE4213	Human-Computer Interaction	3
EE4215	Security Technology	3

**Group C: Level 3 Electives - Students are required to take only one elective from this group.**

Course Code	Course Title	Credit Units
EE3115	Semiconductor and Optoelectronic Devices	3
EE3132	Microelectronic Circuit Designs	3
EE3206	Java Programming and Applications	3
MA3160	Probability and Stochastic Processes	3

### Recommended Study Plan

Click [here](#) for the recommended study plan.

### Did you know?

- ▶ [CityU-EE Boasts 7 FIEEE](#)
- ▶ [Winners of Teaching Excellence Awards](#)
- ▶ [CityU Ranks 154 Worldwide](#)

### CityU-EE Boasts 7 FIEEE

CityU-EE now boasts 7 Fellows of The Institute of Electrical and Electronics Engineers (FIEEE) record for a single academic department in Hong Kong. Moreover, many EE student graduates have received numerous local, regional and international awards for their outstanding performance. CityU came first again in the total grant awarded in the "Electrical and Electronic Engineering" discipline in the 2006-07 Competitive Earmarked Research Grant exercise supported by the Research Grants Council. Click [here](#) for Student Achievements for more information. and you can become a winner too!

### Winners of Teaching Excellence Awards

Five of our professors have won CityU's Teaching Excellence Award since its inception in 2003. CityU-EE also received highly favourable comments from the University Grants Committee 2003 Teaching and Learning Quality Process Review.

### CityU Ranks 154 Worldwide

CityU has shot up the rankings of the world's most prestigious educational institutions. According to The Times Higher Education Supplement 2006, CityU ranks 154 among the world's top 200 universities. Being one of the only four Hong Kong universities included in the top 200, CityU is also one of the top 10 universities in the Greater China Area. CityU has broken into the list of the top 100 technology universities since 2005 and ranks 85 in 2006, a jump of 5 places within a year.

### Enquiries

Tel: (852) 2788 7773 (Ms Lee)  
 Fax: (852) 2788 7791 or (852) 2788 7227  
 Email: [ecepl@ee.cityu.edu.hk](mailto:ecepl@ee.cityu.edu.hk)

Web-site: <http://www.ee.cityu.edu.hk>

- **Want to know more ...**

- Visit [www.cityu.edu.hk/prospectus](http://www.cityu.edu.hk/prospectus) Key in e-code 1585, and browse:
  - detailed course descriptions
  - current CityU students' remarks
  - comments from graduates
  - teachers' advice.

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