Starting 2018, the CUHK EE programme will admit students directly through

- JUPAS channel (JUPAS code: JS4434)
- Other admission channels (for applicants with other academic qualifications such as Associate Degree/Higher Diploma, IB, GCE, etc)

The EE department was ranked number 1 in Hong Kong by the University Grants Committee 2014 Research Assessment Exercise (published in 2015) and was ranked number 1 in Hong Kong and number 28 in the World by Shanghai Ranking’s Global Ranking of Academic Subjects 2017.

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

Students can plan their studies in respect of different career paths, including:

- Professional Engineering
- Entrepreneurship
- Research

**Graduation Project + Specialized Courses**
- Capstone Project
- Advanced Electives:
  - IC Design, Biosensors, Micro-optics

**Other Engineering Electives**
- Computer Networks
- Data Structure
- Software Engineering
- Engineering Economics
- Machine Learning
- Cyber Security
- Artificial Intelligence
- Financial Technology

**Free Electives, General Education & Languages**
- Business Administration
- Science
- Social Science
- Arts, Music
- Sports
- Linguistics

**Advanced Major Courses**
- Technical Electives:
  - Photonics, Optical Fibers, Circuit Design, Semiconductor Devices, Digital Signal Processing, Power Electronics, Medical Instrumentations
  - Professional training:
    - "Build a Gadget"
    - "Code an App"
    - Entrepreneurship
    - Research Skills

  - Microelectronic Devices
  - Applied Electromagnetics
  - Communication Systems

**Foundation Courses**
- Mathematics
- Physics
- Chemistry, Biology
- Engineering Design

**Year 4 or 5**
- One-Year Work-Study Programme (optional)

**Year 4**
- Technical Electives
  - Photonics, Optical Fibers, Circuit Design, Semiconductor Devices, Digital Signal Processing, Power Electronics, Medical Instrumentations

**Year 3**
- Advanced Major Courses
- Professional training:
  - "Build a Gadget"
  - "Code an App"
  - Entrepreneurship
  - Research Skills

**Year 2**
- Fundamental Major Courses
  - Engineering Mathematics
  - Computer Programming
  - Digital Systems

**Year 1**
- Foundation Courses
- Mathematics
- Physics
- Chemistry, Biology
- Engineering Design

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. After the third year of study, all students can participate in the work-study programme on a voluntary basis. Each participant is required to spend one year, as full-time employee, in a selected local electronic or IT company. The student will continue his/her final year of study after the internship. In recent years, there are on average 50% of our students who opted for work-study.

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. Some examples include: University of Illinois at Urbana-Champaign (USA), University of Toronto (Canada), Technical University of Denmark (Denmark), Karlsruhe Institute of Technology (Germany), KTH Royal Institute of Technology (Sweden), Osaka University (Japan).

Miss LAU Ming Wai, Laura (first from the left) participated in the Exchange Programme to The University of Sydney in Australia in 2014-15 Summer.

Participating companies include:
- HSBC (The Hong Kong and Shanghai Banking Corporation Ltd.)
- MTR (Mass Transit Railway)
- SmarTone Telecommunications Ltd.
- Asia Satellite Telecommunications Co. Ltd.
- V Tech Telecommunications Ltd.
- ASM Assembly Automation Ltd.
- China Light & Power
- Hong Kong Science and Technology Park
- Fujitsu PC Asia Pacific
- Soloman Systech

Mr FUNG Ho Lun, Perry (second from the left) participated in the Exchange Programme to The University of Southampton in UK in 2016-17.
The 2014 Research Assessment Exercise (RAE 2014), which is an extensive independent peer-assessment of research performance across the university sector in Hong Kong, found that within the Electrical and Electronic Engineering discipline, The Chinese University of Hong Kong had more than twice the sector-wide average of 10% in the top category of 4* (world leading) research. The Electrical and Electronic Engineering Panel of RAE 2014 found that 21% of our research was in the 4* category, ahead of the second and third placed institutions which had 16% and 7%, respectively, in the 4* category.

The EE department was ranked number 1 in Hong Kong by the University Grants Committee 2014 Research Assessment Exercise (published in 2015) and was ranked number 1 in Hong Kong and number 28 in the World by Shanghai Ranking’s Global Ranking of Academic Subjects 2017.

**Multimedia Technology**

**Digital Entertainment:** High Definition Digital TV, Computer Animation & Virtual Reality, Computer Generation of Voice & Music

**Health & Medical:** Digital Hearing Aids, Medical Image Processing

**Security:** Forensic Voice Verification, Intelligent Surveillance Vision

**Optoelectronics & Optical Communication**

**Optic Communication:** Cable TV, Broadband Internet

**Micro-optics:** Optical Memory, LCD Projectors, CCD Camera

**Integrated Optics:** High-Speed Fibre Optic Components

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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
無線計算機聯網

Radio-frequency Radiation Measurement
無線電波輻射測量
A degree 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: telecommunications, broadcasting, automotive electronics, railway, electric power, semiconductor, medical equipment, government agencies (e.g. EMSD and ICAC), information technology, industrial manufacturing, and product design. Some of our graduates choose to pursue postgraduate studies in local or overseas institutions.

**Employment of Electronic Engineering Graduates 2016**

- **Telecommunications**: 17.0%
- **Administrative/Management**: 11.2%
- **Data Communications & Network/Internet Engineering**: 9.9%
- **System Solution & Services**: 13.0%
- **Software Design & Development**: 8.8%
- **Teaching/Others**: 1.9%
- **Medical Devices & Instrumentation**: 3.8%
- **Mechanical Engineering**: 3.8%
- **Information Systems Administration & Management**: 3.8%
- **Electronic/Electrical Engineering**: 17.0%
- **Engineering Consultancy**: 1.9%
- **Industrial Engineering & Product Design/Manufacture**: 7.6%
- **Sales/Marketing**: 3.8%
- **Industrial Engineering & Product Design/Property Management**: 1.9%
- **Software Design & Development**: 3.8%
- **Scientific/Research Work**: 1.9%
- **Engineering Consultancy**: 1.9%
- **System Solution & Services**: 1.9%
- **Mechatronics, Medical Devices & Instrumentation**: 3.8%
### 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.

<table>
<thead>
<tr>
<th>Minimum Admission Requirement</th>
<th>Subject</th>
<th>Minimum Grade</th>
<th>Subject Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Subjects</td>
<td>English Language</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Chinese Language</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Liberal Studies</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>Two Elective Subjects</td>
<td>Any one science subject from the following: Biology/ Chemistry/ Combined Science/ Physics/ Information and Communication Technology/ Mathematics Extended Module I or II</td>
<td>3</td>
<td>1.5 (2 for Physics, Chemistry, M1/ M2 if applicable)</td>
</tr>
<tr>
<td></td>
<td>All other Elective Subjects</td>
<td></td>
<td>#</td>
</tr>
</tbody>
</table>

# The Programme accepts any one subject as the second elective. The preferred subjects include Biology, Chemistry, Combined Science, Physics, Information and Communication Technology, Design and Applied Technology, Mathematics Extended Module 1 or 2. Subject weighting of 1.5 is given to the preferred subjects; 2 is given to Mathematics Extended Module 1 or 2, Physics, Chemistry; and 1.0 is given to any other subjects. In addition to the requirements above, bonus points will be awarded to the 8th and 7th subjects, if any.

### 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 / dept@ee.cuhk.edu.hk  
Homepage: http://www.ee.cuhk.edu.hk