JS1205 Department of Electronic Engineering
(options: BEng Computer and Data Engineering, BEng Electronic and Communication Engineering, BEng Information Engineering)

電子工程學系
[選項：工學士(電子計算機及數據工程學)、工學士(電子及通訊工程學)、工學士(資訊工程學)]

Professional Recognition
All major programmes offered by the Department of Electronic Engineering have been accredited by the Hong Kong Institution of Engineers. Based on the Washington Accord, graduates receive reciprocal recognition from the equivalent bodies in Australia, Canada, China, Chinese Taipei, Hong Kong-China, India, Ireland, Japan, Korea, Malaysia, New Zealand, Pakistan, Russia, Singapore, South Africa, Sri Lanka, Turkey, the United Kingdom and the United States.

Website  http://www.ee.cityu.edu.hk
Tel      (852) 3442 7740
E-mail  eedep@cityu.edu.hk
Our Majors
- Common first year
- Students choose a major after one year of study
- BEng in Computer and Data Engineering (CDE) 工學士 (電子計算機及數據工程學)
- BEng in Electronic and Communication Engineering (ECE) 工學士 (電子及通信工程學)
- BEng in Information Engineering (INFE) 工學士 (資訊工程學)

INFE Computer Network & System
- Networking and Telecommunications 網絡與通訊
- Algorithms and Software 算法與軟件
- Cyber Security and Forensics 網絡安全與鑑證
- Artificial Intelligence and Big Data 人工智慧與大數據

Programme Highlights
CDE Computer Applications
- Digital Systems 數碼系統
- Computer and Embedded Systems 電腦及嵌入式系統
- Security Systems 保安系統
- Data Center and Cloud Computing 數據中心及雲端運算
- Big Data and Multimedia 大數據及多媒體科技

ECE Communication & Engineering
- Wireless Communications & Optical Communications 無線通訊及光通訊系統
- Data Technology & Digital Mobile 數據技術及流動數碼
- Smart Controls & Power Systems 智能管理及能源系統
- e-Security & e-Circuit Design 資訊保安及電子電路設計
- AI Engineering 人工智慧工程

Job Opportunities
Engineering companies, telecommunications, major utilities (CLP, PCCW), transportation (airlines, shipping), government, IT Specialist / Network Administrator, Analyst / Programmer / Software Engineer, Application Developer / Game Developer

Salary Trend
(2012 – 2017 graduates)
$17,000 $16,000 $15,000 $14,000 $13,000 $12,000

Co-curricular Activities & Learning Support
Global Outreach
Uplifting students’ global outreach and international competitiveness through student exchange is one of the Department’s goals. From 2013 to 2018, over 400 students were sent to top universities in the USA, Singapore, Finland, Germany, Canada, Czech Republic, Netherlands, Spain, Sweden, UK, France, Belgium, Korea, Taiwan and mainland China for semester-long exchange and summer exchange.

Also, there is an Overseas Internship Scheme (OIS) to provide students with internship opportunities abroad. Around 40-50 students from the Department are selected yearly to join the Scheme to France, Korea, Singapore, the U.S.A., the U.K., and Canada.

Student Learning Support
The Course Tutoring and Peer Tutoring Schemes aim to nurture good learning skills in our students. Outstanding senior year students are selected to coach students in study through tutorials, regular meetings, and out-of-classroom time. The schemes have successfully created a positive learning atmosphere among peers and have been well received among students.

Internships
In collaboration with industry, the Department aims to provide students with real work experience during their university years and thus better preparing them for work upon graduation through different internship schemes. Students are connected to prominent industrial and business leaders and 60-80 places are secured yearly. Students are free to choose schemes of different duration from 3 months to 1 year.
## Entrance Requirement

Students will apply for admission to the Department of Electronic Engineering (JS1205) and enter a major after one year of study.

### Entrance Requirements and Levels

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
<td>Level 3</td>
<td>Level 3</td>
<td>Level 3</td>
<td>Level 2</td>
<td>Level 3</td>
<td>Level 3</td>
</tr>
<tr>
<td>Notes:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specified subjects under Elective 1 include M1-Calculus and Statistics / M2-Algebra and Calculus, Information and Communication Technology, Physics, Chemistry, Biology, Combined Science and Integrated Science.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Other Considerations

- When considering the priority list of applicants, we mainly consider subject results obtained in current and past two years.

### Direct / Non-JUPAS Applicants

- Associate Degree (AD) / Higher Diploma (HD) graduates or final year students may apply for admission to major programmes with Advanced Standing (Year 2 or Year 3). Applicants are normally expected to have completed the AD/HD award with a CGPA of ≥3.0, or an equivalent overall mark or a credit award.
- Other high school qualifications, e.g. GCE, IB, overseas, AD/HD Year 1 students, may apply to enter Year 1.

## Assessment of Applications

For applicants who have fulfilled the minimum entrance requirements, various types of admission scores are calculated to help the selection of applicants. Presented below is the main admission score used for JS1205.

### Admission Score for Main Consideration

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4 core + 2 elective subjects</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2 for M1 / M2* Information and Communication Technology Physics Combined Science (Phy + Chem) or (Phy + Bio) 1.5 for Chemistry Biology Combined Science (Bio + Chem) Integrated Science 1 for other electives</td>
</tr>
</tbody>
</table>

### Examples

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Student 1</th>
<th>Student 2</th>
<th>Student 3</th>
<th>Student 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core</td>
<td>5 (x 2)</td>
<td>4 (x 1)</td>
<td>3 (x 1)</td>
<td>3 (x 1)</td>
</tr>
<tr>
<td>Chinese Language</td>
<td>4 (x 1)</td>
<td>4 (x 1)</td>
<td>3 (x 1)</td>
<td>3 (x 1)</td>
</tr>
<tr>
<td>Liberal Studies</td>
<td>5 (x 1)</td>
<td>4 (x 1)</td>
<td>3 (x 1)</td>
<td>3 (x 1)</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4 (x 2)</td>
<td>4 (x 2)</td>
<td>5 (x 2)</td>
<td>5 (x 2)</td>
</tr>
<tr>
<td>Elective 1</td>
<td>4 (x 1.5)</td>
<td>4 (x 2)</td>
<td>4 (x 2)</td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information and Communication Technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective 2</td>
<td></td>
<td></td>
<td>5 (x 2)</td>
<td></td>
</tr>
<tr>
<td>Math Extended Module 1 or 2</td>
<td></td>
<td></td>
<td></td>
<td>5 (x 2)</td>
</tr>
<tr>
<td>Information and Communication Technology</td>
<td></td>
<td></td>
<td></td>
<td>4 (x 2)</td>
</tr>
<tr>
<td>Biology</td>
<td>4 (x 1.5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td></td>
<td></td>
<td></td>
<td>5 (x 1)</td>
</tr>
<tr>
<td>Unweighted score</td>
<td>26</td>
<td>24</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>Weighted Score of 4 core + 2 elective subjects</td>
<td><strong>39</strong></td>
<td><strong>40</strong></td>
<td><strong>40</strong></td>
<td><strong>37</strong></td>
</tr>
</tbody>
</table>

* denotes the subject weighting
Graduate Career Outlook

According to the latest 5 years’ Graduate Engagement Survey, over 95% of our graduates were engaged in either employment or postgraduate studies soon after the final exam. The average salary of fresh graduate 2017 was about $17,000. They are engaged in different sectors including IT & engineering, finance and banking, business management, real estate, law, civil services and education.

High demand for EE graduates

It has been consistently revealed in different manpower projection surveys and career-related news that IT professionals and engineers are highly sought-after in different business sectors.

Source: jobsDB.com jobsDB 2018年薪酬調查報告

Source: 1 August 2018, 經濟通etnet

Ms. Candy Liu
(1999, BSc),
General Manager
HKC Technology Limited

Dr. Anna Lau
(2005 BEng, 2007 MPhil, 2010 PhD),
Chief Technology Officer
Laxcen Technology Limited Hong Kong

Mr. Sean Lin
(2015 BEng),
Software Engineer
LinkedIn US

Mr. Tim Ip
(2008 BEng), Security Specialist
University of San Francisco

Mr. Wyan Wong
(2005 BEng), Project Manager
Morgan Stanley

Miss Ling Tsz Yan
(2017 BEng), Process Engineer
ASML Technology Hong Kong Limited

Mr. Frank Wang
(2010 BEng), Security Engineering Manager
Google, U.S.

Mr. Jimmy Lam & Mr. Jimmy Mui
(2014 & 2015 BEng), Engineers
GP Electronics (HK) Limited

Mr. Peter Yu
(2010 BEng), Service Engineer
Rutledge AV Melbourne

Dr. Wu Boping
(2005 BEng), Principal Architect
Huawei Hisilicon Semiconductor

Mr. Oswis Wong
(2012 BEng), CEO & Co-founder
Air Button

Miss Hui Mei Suet
(2014 BEng), Support Engineer
MTR

Source: 2018-19 政府財政預算案

按工種分類，今年「銀行及金融」、「資訊科技」及「市場推廣 / 公共關係」從業員的薪酬增長幅度最高……雙位數增幅亦同樣見於「資訊科技」界的「程式員」及「網絡工程師」，分別為10.2%和13.3%。"JobsDB香港區行政總裁崔啟與"指出：「金融科技為大勢所趨，亦促進了本地金融科技的新相對模式和服務激增……。」

安永(EY)報告：97%企業採用AI — 顛覆性的新科技發展亦成為業界的第二大挑戰，幾乎所有(97%)受訪者都計劃在2023年前採用人工智能(Artificial Intelligence, AI)；而86%的受訪者期望建設的未來企業採用AI。這與去年情況有很大差別，去年數量顯示，只有78%的受訪者表示願意使用機械人，也不會採用AI，而今年僅33%企業表示絕不使用。龐大轉變反映出商業領袖必須適應科技之變化……。除了人工智能，有37%的受訪者認為，科技是提升生產力的主要因素。有26%受訪者認為科技投資的主要目標，是改善客戶體驗。值得留意的是，有14%受訪者希望利用科技發展新的營運模式，開拓新市場和新領域。

客戶數據是創新領域的核心。34%的受訪者表示，客戶數據是加強創新的主要工具。
Student Achievements

- Winner in HSBC Safeguard App Competition (HK$100,000 cash prize)
- IET Prizes 2017
- Second Prize in the 10th International Underwater Robot Competition (2017)
- Winning Three Prizes in Robocon Hong Kong Contest 2017
- HK$100,000 from The Cyberport University Partnership Programme 2017 (FinTech Start-up Project)
- Winning Two Prizes at iCAN 2017 (Canada)
- Second Runner-up in Bank of China HK FinTech Hackathon
- Fulbright Science and Technology Fellowship from US Department of State
- IEEE MTT-S Undergraduate Pre-graduate Scholarship for Spring 2017
- Champion of Disney ImagInations Hong Kong Design Competition 2016

Department’s Highlights

1. Largest EE department among local universities with 55 professors
2. Ranked 16th in Engineering worldwide (US News 2018) and 31st worldwide in Electrical and Electronic Engineering in 2017 (Academic Ranking of World Universities by Shanghai Jiao Tong University)
3. The department boasts 1 Fellow of the Royal Academy of Engineering (UK), 14 IEEE Fellows, one Fellow of the Optical Society of America, one Fellow of the International Federation of Automatic Control, and three Croucher Foundation Senior Research Fellows
4. Six EE professors have been awarded the Teaching Excellence Award by the University
5. A Caring Department emphasizing students’ well-roundedness apart from their technical know-how through ample co-curricular activities
6. Offering three undergraduate major programmes, two taught master programmes, and two research degree programmes (approx. 1,400 students)
7. With the support from the Ministry of Science and Technology, State Key Laboratory of Terahertz and Millimeter Waves established in 2008 is the first such laboratory in engineering discipline in Hong Kong
8. Laboratory space about 5,000 sq. meters