

JS1205 Department of Electrical Engineering



Department of
Electrical Engineering

香港城市大學
City University of Hong Kong

(Options: BEng Computer and Data Engineering,
BEng Electronic and Electrical Engineering*, BEng Information Engineering)

Our Majors

- Common first year
- Students choose a major after one year of study
- Majors offered:
 - 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 Electrical Engineering (EEE) 工學士(電子及電機工程學)*
 - BEng in Information Engineering (INFE) 工學士(資訊工程學)

* Direct Applicants taking Advanced Standing route will be admitted to BEng in Electronic and Communication Engineering in 2020/2021.

Program 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 Technologies 大數據及多媒體科技

EEE- Electronic and Electrical Systems

- Wireless Communications and Data Technology 無線通訊及大數據技術
- Terahertz and Optical Technologies 太赫茲及光學科技
- Photonic, Electronic, and Sensor Devices 光電子及電子器件、感應器
- Smart Control and Power Systems 智能管理及能源系統
- Bioelectronics and Bioinformatics 生物電子及生物信息技術

Job opportunities

Engineering companies, telecommunications, major utilities (CLP, PCCW)

- Engineer (Computer/Technical Support/Telecommunication/Electronic/Electrical/Hardware)
- Scientific Consultant/Technologist

Banking & financial institutions, software and IT companies, transportation (airlines, shipping), government

- IT Specialist/Network Administrator
- Analyst/Programmer/Software Engineer
- Application Developer/Game Developer

Salary Trend (2012 – 2018 graduates)

2018 graduates

- 40% > \$20,000
- 60% > \$19,000



INFE - Computer Network and System

- Networking and Telecommunications 網絡及通訊
- Algorithms and Software 算法及軟件
- Cybersecurity and Forensics 網絡安全及鑑證
- Artificial Intelligence and Big Data 人工智能及大數據
- Signal and Image Processing 訊號及影像處理



Entrance Requirements

HKDSE JUPAS Applicants	Students will apply for admission to the Department of Electrical Engineering (JS 1205) and enter a major after one year of study.					
	Entrance Requirements and Levels					
	Eng. Lang.	Chi. Lang.	Maths.	Liberal Studies	Elective 1	Elective 2
	Level 3	Level 3	Level 3	Level 2	Level 3 any one of specified subjects (Notes)	Level 3 any one subject (Notes)
	<p>Notes:</p> <ul style="list-style-type: none"> 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. More details about entrance requirements are available at: http://www.admo.cityu.edu.hk/jupas/entreq/bd/. 					
	<p>Other Considerations</p> <ul style="list-style-type: none"> When considering the priority list of student applicants, we mainly consider subject results obtained in current and past two years. More details about assessment of applications and other information, including subject weighting for main consideration are available at: http://www.admo.cityu.edu.edu.hk/jupas_hkdse/assessment/bd/. 					
Direct / Non- JUPAS Applicants	<ul style="list-style-type: none"> General Entrance Requirements (http://www.admo.cityu.edu.hk/direct/entreq/bd/), and possess Science or Engineering background. 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. 					

Graduate Career Outlook

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.

創新科技

- 聚焦生物科技、人工智能、智慧城市和金融科技4大範疇
- 預留 **200** 億元發展落馬洲河套區「港深創新及科技園」第一期
- 向創新及科技基金注資 **100** 億元，支援應用研發
- 預留 **100** 億元建設醫療科技和人工智能及機械人科技創新平台，匯聚頂尖科研機構和企業
- 撥款 **100** 億元改善科學園設施和加強支援園內的公司
- 向數碼港撥款 **2** 億元加強支援初創企業，另撥款 **1** 億元發展電子競技



Source: 2018-19 政府財政預算案

“Chapter 4 - Human Resource and Education in IT” of *HK as an Information Society - 2019 Edition*

4.3 In response to the demand for IT manpower in various industries, **the Government has been deploying substantial resources in the areas of education and training for nurturing IT personnel in Hong Kong.**

4.4 The findings of the Manpower Survey of the **Innovation and Technology Sector** showed that the total number of IT employees increased **from 66,697 in 2008 to 95,780 in 2018**, representing an **increase of 43.6%** over the period.

Source: *HK as an Information Society - 2019 Edition* by Census and Statistics Department, The Government of the HKSAR

Department's Highlights

1. Largest EE department among local universities with 55 professors
2. Ranked 15th in Engineering worldwide and 1st in Hong Kong (*U.S. News Best Global Universities Rankings 2020*); 21st worldwide and 1st in Hong Kong in Engineering (*Performance Ranking of Scientific Papers for World Universities 2019 by National Taiwan University*)
3. The department boasts 2 Fellows of the Royal Academy of Engineering (UK), 1 Fellow of the World Academy of Sciences, 1 Highly Cited Researcher (since 2009 by Clarivate Analytics), 16 IEEE Fellows, and 3 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 – Student Tutoring Scheme, Honor Society, Student Exchange, Internships, Study Tours, Softskill and Career Advising Workshops
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