Programme Introduction
課程簡介

This programme aims at providing graduates of electronic engineering, information engineering, electrical engineering, telecommunications engineering, computer science and other related disciplines an opportunity for further study at postgraduate level. Students will embark on a broad choice of core subjects in areas such as multimedia technologies, Internet of Things (IoT), telecommunications and machine intelligence, etc. that enable them to meet new challenges and tap new opportunities in relevant fields. Students can also acquire the latest technical know-how by registering for specialized subjects in a chosen area that focuses on the modern issues facing the engineering profession today. Students who have managerial responsibilities can take electives on business or management according to their interests and career needs.

本課程為電子工程、資訊工程、電機工程、通訊工程、計算機科學和其他相關學科的畢業生提供研究生水平的進修機會。學生可修讀例如多媒體技術、物聯網、通訊和機器智能等內容充實豐富的核心科目，用以裝備自己面對新挑戰和把握新機遇。學生亦可通過修讀為研究專門領域而設的專修學科，從而獲得最新的專業知識和技術。負責管理工作的學員更可根據興趣和職業所需，選修商業或管理方面的學科。

Specialism in Internet of Things
「物聯網」專修

The programme offers the specialism in Internet of Things (IoT) to cater for the emerging needs of IoT experts in the industry. This specialism covers cutting-edge technologies in wireless communications, sensor networks, and IoT applications, etc., enabling students to explore advanced knowledge and develop in the related fields.

本課程備有「物聯網」專修為業界培訓專才。課程涵蓋無線通訊、感測網路以及物聯網應用程式等領先科技的學科，為學員提供相關專業知識和發展的機會。

Specialism in Multimedia Signal Processing and Communications
「多媒體信號處理及通訊」專修

The specialism in Multimedia Signal Processing and Communications provides postgraduate-level professional and technical training to practitioners in the area in order to enable them to tap the ever-growing market needs and business opportunities related to multimedia technology.

本課程備有「多媒體信號處理及通訊」的專修，為學生提供專門的技術訓練，使他們能夠迎合有關多媒體科技專業領域的市場需求和商機。

Flexible Programme Structure

Award	Dissertation Option	Non-Dissertation Option
MSc in Electronic and Information Engineering	**7** taught subjects, including at least **4** EIE Core Subjects, and a Dissertation	**10** taught subjects, including at least **6** EIE Core Subjects
PgD in Electronic and Information Engineering	N/A	**6** taught subjects, including at least **4** EIE Core Subjects
MSc in Electronic and Information Engineering (Internet of Things) / (Multimedia Signal Processing and Communications)	**7** taught subjects, including at least **5** EIE Core Subjects specified for the specialism, and a Dissertation	**10** taught subjects, including at least **7** EIE Core Subjects specified for the specialism
PgD in Electronic and Information Engineering (Internet of Things) / (Multimedia Signal Processing and Communications)	N/A	**6** taught subjects, including at least **5** EIE Core Subjects specified for the specialism

Study at Your Own Pace and Choice on Subject-based

If you are interested in pursuing further education but would prefer registering as a candidate for the MSc award at a later stage, you may take any MSc subject at your own choice in the capacity of a subject-based student.

有意繼續深造，但希望在稍後階段才入讀本課程的人，可以考慮以學科學生的身份自行選擇修讀本課程內的科目。

Broad Coverage of Technical Areas

		Subject
		EIE509 Satellite Communications - Technology and Applications
		EIE511 VLSI System Design
	🟠	EIE515 Advanced Optical Communication Systems
🔵		EIE522 Pattern Recognition: Theory and Applications
🔵		EIE529 Digital Image Processing
🔵	🟠	EIE546 Video Technology
🔵	🟠	EIE553 Security in Data Communication
🔵	🟠	EIE557 Computational Intelligence and its Applications
🔵		EIE558 Speech Processing and Recognition
	🟠	EIE560 Microelectronics Processing and Technologies
🔵		EIE563 Digital Audio Processing
🔵	🟠	EIE566 Wireless Communications
🔵	🟠	EIE567 Wireless Power Transfer Technologies
	🟠	EIE568 IoT - Tools and Applications
	🟠	EIE569 Sensor Networks
🔵	🟠	EIE570 Deep Learning with Photonics
		EIE571 Photonic System Analysis
		EIE572 Information Photonics
🔵	🟠	EIE573 Mobile Edge Computing
🔵	🟠	EIE575 Vehicular Communications and Inter-Networking Technologies
		EIE577 Optoelectronic Devices
	🟠	EIE579 Advanced Telecommunication Systems
		EIE580 Radio Frequency and Microwave Integrated Circuits for Communication System Applications
		EIE587 Channel Coding
🔵	🟠	EIE589 Wireless Data Network
	🟠	COMP5434 Big Data Computing

Award Title	Core Subjects
MSc/PgD in Electronic and Information Engineering	EIE509 EIE511 EIE515 EIE522 EIE529 EIE546 EIE553 EIE557 EIE558 EIE560 EIE563 EIE566 EIE567 EIE568 EIE569 EIE570 EIE571 EIE572 EIE573 EIE575 EIE577 EIE579 EIE580 EIE587 EIE589
🟠 MSc/PgD in Electronic and Information Engineering (Internet of Things)	EIE515 EIE546 EIE553 EIE557 EIE560 EIE566 EIE567 EIE568 EIE569 EIE570 EIE573 EIE575 EIE579 EIE589 COMP5434
🔵 MSc/PgD in Electronic and Information Engineering (Multimedia Signal Processing and Communications)	EIE522 EIE529 EIE546 EIE553 EIE557 EIE558 EIE563 EIE566 EIE567 EIE570 EIE573 EIE575 EIE589

^ Around 14 of the above subjects will be offered each year.

The Department reserves the right not to offer any one of the subjects. The offer of subjects is subject to review and change if deemed appropriate by the Department.

Unique Specialism – Internet of Things

Trends of Internet of Things

Internet of Things (IoT) is defined as adding the connection of things to the Internet, including existing products serving their main functionalities and new products developed to serve the IoT world. IoT is booming and more and more devices are connected to the Internet every day. The Industrial IoT draws increasing attention due to its potential application in the industry in recent years. For example, the Hong Kong Government has been using IoT sensors to improve public services. Sensors are deployed at strategic routes to collect real-time traffic data, in manholes of city storm drains to detect water levels, and inside the slopes to detect impending landslides. Moreover, there are already about 10,000 IoT sensors deployed at the Hong Kong International Terminals to help monitor and analyze passenger numbers, luggage handling, retail traffic, and even toilet usage.

物聯網（IoT）被定義為將事物連接到互聯網，其中包括現有的產品及為物聯網世界而開發新產品。物聯網正在蓬勃發展，每天都有越來越多的設備連接到網路。近年，工業物聯網因其在行業中的發展潛力而備受關注。香港政府一直應用物聯網感測器來改善公共服務。設置感測器在主要幹道上能收集即時交通數據，設置在城市雨水渠的沙井中能檢測水位，設置在斜坡內則能偵測即將發生的山泥傾瀉。香港國際貨櫃碼頭亦已設置約 10,000 個物聯網感測器，以協助監控和分析乘客數量、行李處理、零售流量，甚至廁所的使用情況。

IoT is transforming our world and business models. It allows everyday objects to collect and transmit data, which in turn helps companies gain customer insights and offer new products. Academically, IoT has close connections with information technology and computer science such as computational intelligence, data communication, pattern recognition, personal networking technology, business administration including global supply chain management and quality management, health technology and informatics including bioinformatics and applications of radiation science, etc. As proposed in the recent Hong Kong IoT Conference, IoT will be extensively applied to the areas like Smart Business, Smart Healthcare, Smart Mobility, Smart Supply Chain and Mass-scale 5G Adoption, which indicate the wide coverage of IoT in everyday life.

物聯網正在改變我們的世界和商業模式。它利用日常物品來收集和傳輸數據，從而幫助公司洞悉顧客的洞察力和提議新產品。在學術範疇上，物聯網與資訊科技和電腦科學（如計算智能、數據通訊、模式識別、個人網路技術）、工商管理（包括全球供應鏈管理和品質管理）、健康技術和資訊學（包括生物資訊學和輻射科學應用）有著密切的聯繫。香港物聯網研討會曾提出，物聯網將會被廣泛應用於智慧商業、智慧醫療、智慧移動、智慧供應鏈和大規模5G應用等領域。

Programme Features

This specialism offers valuable support to both the local and non-local IoT industry by producing well-trained engineers in the related fields. The programme also provides an excellent link between physical principles and practical electronic implementation.

本專業透過培養相關領域的工程師，為本地和非本地物聯網行業提供了寶貴的支援。本專業亦為聯繫物理原理和現實應用提供了一個良好的平台。

Major Subject Areas:
- Big Data
- Computational Intelligence
- Data Security
- IoT Tools and Applications
- Sensor Networks
- Vehicular Communications
- Video Technologies
- Wireless Communications
- Wireless Data Network
- Wireless Power Transfer Technologies

Excellent Job Prospects

As there is a genuine demand for engineers equipped with up-to-date knowledge in the area of IoT in addition to the need of engineers trained with broad engineering aspects related to the electronics and information disciplines, professionals and engineers with training in IoT and related technologies are very highly sought after. There is and will continue to be a high demand for skilled people with IoT training which leads to exciting and promising careers. The graduates of this specialism will also form a strong force to support further development in 5G, deep learning, machine learning, and AI, etc. for this fast-growing sector.
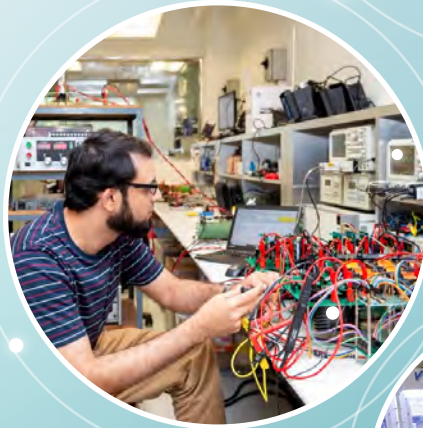
市場上對接受過物聯網培訓，並擁有電子和資訊學科方面知識的技術人員的需求仍然很高。本專業的畢業生將會成為支持5G、深度學習、機器學習、人工智慧等的強大支援，令這個快速發展的領域得以進一步發展。

MSc Studentship Project Scheme
碩士助學金計劃

The Department has set up MSc Studentship for students with good academic performance and potential to pursue the MSc dissertations and research works at the same time. Each Student being awarded the Studentship will receive a monthly support of HK$6,000 for a period of 12 months to do the MSc dissertation and carry out research project work simultaneously under the same supervisor in the capacity of a part-time Research Assistant.

本系設立助學金以鼓勵學業成績優異和有潛質的同學同時選修理學碩士論文及進行研究工作。成功申請的學生將受聘為兼任研究助理，可獲取為期一年每月港幣6,000元之助學金，以同時選修論文和協助指導教授從事研究。

Programme Information
課程資料

Host Department 主辦學系	Department of Electrical and Electronic Engineering (EEE) 電機及電子工程學系
Programme Code 課程編號	46011-EIE (Full-time 全日制) / 46011-EIT (Part-time 兼讀制)
Mode of Study 修讀模式	Mixed mode 混合修讀模式 Classes are normally held on weekday evenings. Some classes may be held during the daytime on weekdays and weekends. A mixed-mode programme gives you an option to engage in a full-time (9 credits or more per semester) or part-time study load (less than 9 credits per semester). 本學位課程一般安排於平日（星期一至五）晚上上課，部份課堂會於平日及週末日間進行。「混合修讀模式」讓學員可選擇全日制（每個學期修讀9個學分或以上）或兼讀形式上課（每個學期修讀少於9個學分）。
Duration of Study 修讀期	Normal Study Duration 一般修讀期: 1.5 years (Full-time) 一年半 (全日制) / 2.5 years (Part-time) 兩年半 (兼讀制)
Structure 模式	Credit-based 學分制
Total Credits for Graduation 畢業學分	30 credits for MSc, 18 credits for PgD 碩士學位課程需完成30學分 深造文憑課程需完成18學分
Tuition Fee 學費	HK$ 6,100 per credit for local and non-local students 本地及非本地學生每學分為港幣6,100元
Entrance Requirements: 入學要求	An honours degree in engineering, science, technology, or Chartered Engineer (CEng), or equivalent qualification. 擁有工程，科學或技術榮譽學士學位，或特許工程師資歷或同等學歷。
English Entrance Requirements: 英文入學要求	If you are not a native speaker of English, and your Bachelor's degree or equivalent qualification is awarded by institutions where the medium of instruction is not English, you are expected to provide one of the following proficiency test results (taken within 2 years) for fulfil the minimum English language requirement for admission purpose: • A score of 80 or above in the Test of English as a Foreign Language (TOEFL) Internet-based test; OR • An Overall Band score of 6.0 or above in the International English Language Testing System (IELTS) Academic module. 如果你不以英語為母語，並且你的學士學位或同等學歷是由教學語言不是英語的機構頒發，則你需要提供以下能力測試結果之一（2年內獲得），以完成入學的最低英語語言要求： • 英語作為外語（託福）網路考試成績達到 80 分或以上； • 國際英語語言測試系統（雅思）學術模組的總分達到 6.0 或以上。

Application Period: 申請日期	Early Round Application Deadline: 16 November 2023 Main Round Application Deadline 30 April 2024
Programme Leader: 課程主任	Professor Changyuan Yu Telephone: (852) 2766 6258 Email: changyuan.yu@polyu.edu.hk
General Enquiry: 查詢	EEE General Office Telephone: (852) 2766 6260 Email: eee.tpg@polyu.edu.hk
Visa Application: 簽證申請	Upon admission, PolyU will help to apply for a student visa. You are strongly advised to submit your application as early as possible, as it typically takes 8 to 10 weeks to process student visa application.