Why HKU Engineering
Comprehensive and Flexible Programmes
Major and Minor Options
HKU-Cambridge Undergraduate Recruitment Scheme (Engineering) / Entrance Scholarship
Tam Wing Fan Innovation Wing / Tam Wing Fan Innovation Wing Two
Innovation Academy

Student Experiential Learning
Student Exchange
Internship
Service Learning
Undergraduate Research Fellowship Programme and others
Student Achievements

Bachelor of Engineering (BEng) Programmes [JS6963]
BEng in Civil Engineering
BEng in Computer Science
BEng in Computer Engineering / Electrical Engineering / Electronic Engineering
BEng in Industrial Engineering and Logistics Management
BEng in Mechanical Engineering
BEng in Biomedical Engineering [JS6925]
BEng in Engineering Science [JS6951]
BASc in Financial Technology [JS6248]
BEng in Data Science and Engineering [JS6262]
Global Engineering and Business Programme [JS6937]

Admissions Requirements
Engineering Society
WHY HKU Engineering?

Honours and Awards
We have 6 Chinese Academy of Engineering Academicians, 13 Chinese Academy of Sciences Academicians, 2 National Academy of Engineering, USA Academicians and 5 Royal Academy of Engineering, UK Academicians.

Source: https://www.cpao.hku.hk/firstandforemost/research
https://www.hku.hk/research/our-researchers/academicians.html

Long and Glorious History
Nurturing Innovators
Established in 1911, HKU is the first university in Hong Kong. The Faculty of Engineering is one of the three founding faculties of the University.

Source: https://www.cpao.hku.hk/firstandforemost/research
https://www.hku.hk/research/our-researchers/academicians.html

Professional Recognition
The Hong Kong Institution of Engineers
Like Law, Medicine and Dentistry, studying for Engineering is leading to a professional degree in Hong Kong. All programmes under the Bachelor of Engineering [JS6963] and Bachelor of Engineering in Biomedical Engineering [JS6925] and Global Engineering and Business Programme [JS6937] now being offered are accredited by The Hong Kong Institution of Engineers (HKIE). With that standing, the professional qualification of our engineering graduates is mutually recognised by most countries, such as the United States, Australia, Canada, Japan, Korea, New Zealand, Singapore and South Africa. Such recognition widens graduates’ career opportunities globally.

HKU is one of the BEST UNIVERSITIES in Hong Kong, Asia, and the world
We have a LONG AND GLORIOUS HISTORY
We have the STRONGEST Alumni Base
THE HIGHEST EMPLOYMENT RATE among any UGC-funded universities
We stand with the TOP UNIVERSITIES in the world

HKU Ranked 1st in Hong Kong
HKU Ranked 1st in Hong Kong
98.9% Graduate Employment rate in 2022
40,000+ The Strongest Alumni Network in Hong Kong

Why HKU Engineering?

Best Students We admit the Best Students
Research We excel in Research

5th in Asia 26th in the world
Quacquarelli Symonds (QS) World University Rankings 2024
and Asia University Ranking 2024

4th in Asia 35th in the world
Times Higher Education (THE) World University Rankings 2024
and Asia University Ranking 2023

HKU is the first university in Hong Kong. The Faculty of Engineering is one of the three founding faculties of the University.
apply to hku

comprehensive and flexible engineering programme

the bachelor of engineering [56963], bachelor of engineering in engineering science [56951], bachelor of engineering in biomedical engineering [56925] and bachelor of arts and sciences in financial technology [56248], and bachelor of engineering in data science and engineering [56262] are four-year broad-based, comprehensive and flexible engineering programmes while the global engineering and business programme (gebp) [56937] is a five-year double degree programme which leads to a bachelor of engineering/bachelor of engineering in biomedical engineering and bachelor of business administration double degree.

flexible

programme structure

beng programmes
(common code admissions) [beng] [56963]

• common year 1
  programme selection’ at the end of year 1
  • year 2-4
  programmes:
    • beng(cvie) – civil engineering
    • beng(compsc) – computer science
    • beng(ce) – computer engineering
    • beng(ee) – electrical engineering
    • beng(elec) – electronic engineering
    • beng(ELM) – industrial engineering and logistics management
    • beng(mE) – mechanical engineering
  • declare 2nd major and/or minor(s) before year 4

beng in biomedical engineering
[beng(bme)] [56962]

• year 1
  • engineers in the modern world
    • computer programming ii
    • thermofluid mechanics
  • common core courses
    • language enhancement courses
    • university requirements
  • advanced discipline courses
  • declare minor before year 4

basc in financial technology
[basc(fintech)] [56248]

• year 1-2
  • fintech discipline core courses
  • declare 2nd major and/or minor(s) before year 4

beng in data science and engineering
[beng(dses)] [56262]

• year 1-2
  • engineering and discipline core courses
  • declare 2nd major and/or minor(s) before year 4

beng in engineering science
[beng(engsc)] [56951]

• year 1
  • selection of major option at the end of year 1
  • year 2-4
  • major options:
    • healthcare engineering
    • energy engineering
    • environmental engineering
    • materials engineering
    • systems analytics
  • declare 2nd major and/or minor(s) before year 4

global engineering and business programme
(whiich leads to bachelor of engineering/bachelor of engineering in biomedical engineering and bachelor of business administration double degree) [gebp] [56937]

• year 1
  • beng
    • common year 1
    • programme selection’ at the end of year 1
  • beng(bme)
    • engineering core courses
  • year 2-4
  • beng programmes:
    • beng(cvie) – civil engineering
    • beng(compsc) – computer science
    • beng(ce) – computer engineering
    • beng(ee) – electrical engineering
    • beng(elec) – electronic engineering
    • beng(ELM) – industrial engineering and logistics management
    • beng(mE) – mechanical engineering
    • beng(bme) – biomedical engineering

study 9 business courses from 5 major options

• entrepreneurship, design and innovation
  • finance
  • human resource management
  • information systems and analytics
  • marketing
  • declare 2nd major and/or minor(s) before year 4

• year 5
  • study bba on self-financing basis

beng/beng(engsc)/beng(bme)

university requirements:

• language enhancement courses
  • common core courses
  • 24 - 26 discipline requirements:
    • including core, elective, capstone experience, internship, and free electives
    • total
  • total

basc(fintech)

university requirements:

• language enhancement courses
  • common core courses
  • total

gebp (year 1 to 4)

university requirements:

• language enhancement courses
  • common core courses
  • total

engineering core courses*

• discipline requirements:
  • including core, elective, capstone experience, internship, and free electives
  • business course from 5 major options
  • total

with regard to the course to be taken in the fifth year, please refer to the regulations and syllabuses for the degree of bachelor of business administration (bba) in conjunction with the degree of bachelor of engineering or bachelor of engineering in biomedical engineering.
Undergraduate Recruitment Scheme (Engineering) for Undergraduate Engineering Students

Under the flexible structure, high-calibre students are allowed to pursue major/minor options in a variety of disciplines.

**Major options**

- BEng(CompSc), BEng(EngSc), BASc(FinTech) and BEng(DS&E) students can opt for second major study in either another engineering discipline, or areas of study offered by other faculties, by completion of additional 12 to 16 courses in a second major option.

**Year of study**

<table>
<thead>
<tr>
<th>Year</th>
<th>BEng(CompSc) / BEng(EngSc) / BEng(DS&amp;E)</th>
<th>BASc(FinTech)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>University and Engineering core courses</td>
<td>University and Discipline core courses</td>
</tr>
<tr>
<td>Year 2-4</td>
<td>Discipline courses and courses to fulfill second major options</td>
<td></td>
</tr>
</tbody>
</table>

**Minor options**

Students can opt for minor study in either another engineering discipline, or areas of study offered by other faculties. In general, students have to complete 6 to 8 courses in a minor in addition to their study in the BEng programme.

**Offering Faculties**

**Examples of Minor Options**

<table>
<thead>
<tr>
<th>Engineering</th>
<th>Arts</th>
<th>Business and Economics</th>
<th>Science</th>
<th>Social Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Computer Science</td>
<td>- French</td>
<td>- Accounting</td>
<td>- Actuarial Studies</td>
<td>- Cognitive Science</td>
</tr>
<tr>
<td>- Data Science and Engineering</td>
<td>- German</td>
<td>- Economics</td>
<td>- Chemistry</td>
<td>- Geography</td>
</tr>
<tr>
<td>- Environmental Engineering</td>
<td>- Japanese Language</td>
<td>- Science</td>
<td>- Mathematics</td>
<td>- Physics</td>
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<tr>
<td>- Geotechnical Engineering</td>
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<td>- Risk Management</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- Environmental Science</td>
<td>- Statistics</td>
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<td></td>
<td></td>
<td></td>
<td>- Journalism &amp; Media Studies</td>
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<td></td>
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<td></td>
<td></td>
<td>- Sociology</td>
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<td></td>
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<td></td>
<td>- Actuarial Studies</td>
</tr>
</tbody>
</table>

**HKU-CAMBRIDGE**

Undergraduate Recruitment Scheme (Engineering)

The “HKU-Cambridge Undergraduate Recruitment Scheme (Engineering)” (the Scheme) is a competitive scheme for high-calibre students with excellent academic credentials. Under the Scheme, selected BEng students will study at HKU for the first two years, and continue their studies at the University of Cambridge for their third to fifth year of studies. Upon successful completion of the five years of studies, students will be conferred the Master of Engineering, the Bachelor of Arts (Honours) and the Master of Arts degrees by the University of Cambridge, and the Bachelor of Engineering degree by HKU.

*Only first year students reading for the BEng, BEng(ME), BEng(EngSc) and GEBP are eligible to apply for the Scheme. BEng(CompSc), BASc(FinTech) and BEng(DS&E) students are not eligible for the Scheme.*

**ENTRANCE SCHOLARSHIP**

for Undergraduate Engineering Students

To attract high calibre students, the Faculty of Engineering established the “Entrance Scholarship for Undergraduate Engineering Students” in 2023. Scholarships shall be awarded annually to first year full-time undergraduate students enrolled in UGC-funded programmes on the basis of their academic performance at prevailing public examinations for admissions to the Faculty. Subject to satisfactory academic performance in the first year, the Scholarship shall be tenable for two years.
Entrusting and empowering our future innovators

Tam Wing Fan Innovation Wing One aims to unleash students' creativity by entrusting them to spearhead ambitious innovation and technology projects that will shape the future. The iconic facility is located at the heart of the campus, offering 2,400m² of space with state-of-the-art resources and a supportive environment. Innovation Wing One encourages students to push the boundaries of their imaginations and collaborate across disciplines, fostering groundbreaking solutions to real-world challenges. The atmosphere of creativity, openness and vibrancy fosters interdisciplinary innovations among students and faculty members in Engineering and Technology.

Turning idea into reality

Innovation Wing is equipped with comprehensive prototyping facilities and equipment for students to turn ideas into reality. It offers a spacious assembling area with state-of-the-art digitally controlled facilities, such as 3D printers, laser cutting and engraving machines, waterjet cutting machine, measuring tools, hand/power toolsets, and specialised electronic workbenches, for our students to work on their hands-on projects. The digital innovation zone includes a computer-aided design studio, multimedia and podcast studio, and AR/VR studio to support students' innovation with digital technology.

Inspiring advanced technology workshops

The thematic workshops enable students to get in touch with advanced technologies and learn from the faculty members who are experts in the related areas and apply what they have learnt to tackle the grand challenges in the world. For example, in the workshop about new and advanced materials, there is a research-grade 3D Printer that uses micro stereolithography technology to produce highly precise parts with a resolution in micron scale. The workshop on generative AI technologies offers high-performance computing devices and access to cloud computing resources to facilitate the learning and development of advanced AI applications for social good.

The Student Interest Group (SIG) programme encourages students with common interests to work together on student-led projects. It attracts not only Engineering students, but also students from other Faculties to collaborate on technology innovative projects.

Sparking environment for disseminating ideas and achievements

Innovation Wing encourages knowledge exchange and peer learning. Poster hallway, project wall and social media sharing platform are set up for displaying and sharing inventions, ideas and achievements. A seminar stage with an LED wall is located next to the relaxing brainstorming area where students can exchange ideas, showcase their inventive designs and harness timely and constructive feedback from peers and faculty members.

Tam Wing Fan Innovation Wing Two

Tam Wing Fan Innovation Wing Two has emerged as an empowering platform for engineering researchers, facilitating synergistic interaction and collaboration with professionals and researchers from various disciplines. This convergence enables researchers to address grand challenges and deliver research outputs with significant impact on Hong Kong and global communities.

On the Edge of Discovery

Innovation Wing Two is located at G/F of Run Run Shaw Building and is connected with Innovation Wing One via a covered walkway. It serves as an essential platform to disseminate the Faculty’s latest research achievements, findings and outputs to the broader HKU and Hong Kong communities.

A wide variety of research-related activities and initiatives including themed exhibitions and weekly TechTalks are conducted by our Faculty members and their PhD students. These activities not only enhance the engagement with the community and show the strength of the Faculty in research, but also attract academics and industry professionals for in-depth communications and collaborations. It allows the Faculty to advance its cutting-edge research fronts and expand its research network with academia and industry in the global context.

Tam Wing Fan Innovation Wing

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Tam Wing Fan Innovation Wing Two

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Website : https://innowings.engg.hku.hk/innowing2/
A magnet for talents, a platform to stimulate.

Innovation Academy
Faculty of Engineering, HKU

InnoHub connects students from the ten faculties at HKU for cross-disciplinary collaboration and to prepare them for addressing the grand challenges of the world.

Innovation programmes and activities

- **InnoHub**
  - InnoHub connects students from the ten faculties at HKU for cross-disciplinary collaboration and to prepare them for addressing the grand challenges of the world.

- **Pitch your innovative ideas**
  - Students make use of this opportunity to present their innovative ideas and recruit prospective teammates and academic advisors. It helps to improve students’ ability to effectively advocate an idea or project to a large group of audience. It also allows flexibility for students to form their own teams and grow their community of interest and passion.

- **Engineering Inno Show**
  - This showcase carnival enables students to demonstrate the outcome of learning and showcase their creations at the end of every semester. Students can illustrate their inventive designs and demonstrate their research and projects. They can also harness constructive feedback from peers, teachers, industry experts and the public through knowledge exchange, and spin their ideas into innovative (re)inventions.

- **Student-initiated course**
  - This student-run experiential activity provides students with opportunities to design, develop and teach a course on a technology-related topic under the supervision of a Faculty Advisor. By teaching a course of special interest which is not covered in formal engineering curriculum, the process of ‘learning by teaching’ helps to train students’ confidence, organisation and communication skills.

- **Funding scheme for student projects/activities by Tam Wing Fan Innovation Fund and Philomathia Foundation Innovation Fund**
  - The Scheme aims to support the development of creative student projects/activities for tackling emerging complex engineering problems in the world. The funded projects/activities focus on out-of-classroom learning experiences with the aim of aligning with the vision and missions of the Faculty of Engineering and the Innovation Academy.

- **Sharing and workshops**
  - Distinguished innovators, entrepreneurs, industry leaders, academic staff, researchers and alumni are invited to give inspirational sharing on innovation-related topics and their success stories. It also creates opportunities for active exchange and learning of hands-on skills and advanced technologies.
The Faculty of Engineering encourages students to join either the University-level or Faculty-level exchange programmes to study in prestigious institutions around the world for one semester or one academic year.

An average of 22% of engineering students are going abroad every year. Some examples of the universities are:

- **US**
  - Drexel University
  - Emory-Riddle Aeronautical University
  - Princeton University
  - Tufts University
  - University of California
  - University of Illinois at Urbana-Champaign
  - University of Wisconsin-Madison

- **UK**
  - King’s College London
  - University College London
  - University of Cambridge
  - The University of Edinburgh
  - The University of Manchester

- **Australia**
  - Monash University
  - University of Melbourne
  - University of New South Wales
  - University of Queensland
  - The University of Sydney

- **Canada**
  - McGill University
  - Queen’s University
  - The University of British Columbia
  - University of Calgary
  - University of Toronto
  - University of Waterloo

- **Spain**
  - University of Navarra

- **Finland**
  - Aalto University

- **Denmark**
  - Technical University of Denmark

- **Germany**
  - Bremen University of Applied Sciences
  - Technical University of Darmstadt
  - Technical University of Munich

- **France**
  - Centraldes Sciences Appliquées de Toulouse
  - ECAM LaSalle

- **South Korea**
  - Korea Advanced Institute of Science and Technology (KAIST)

- **Japan**
  - Tohoku University

- **Singapore**
  - Nanyang Technological University
  - National University of Singapore

- **Other**
  - Technical University of Munich
  - Technical University of Darmstadt
  - Bremen University of Applied Sciences
  - Institut National des Sciences Appliquées de Toulouse
  - CentraleSupélec
  - Institut National des Sciences Appliquées de Toulouse

During my exchange programme at NUS, I explored Singapore's rich culture and diverse food scene. Through various activities and projects such as making an aluminium beam, I made lifelong friends from different parts of the world. The academic rigour at NUS challenged me to excel, while the support from professors and peers allowed me to grow. My exchange experience was a perfect blend of personal growth, academic excellence and unforgettable memories that I will cherish forever.

My exchange study in Canada provided me with the opportunity to broaden my horizons. Living in a new country enabled me to immerse myself in a different culture, make lifelong friendships, and try a variety of delicious foods. Exploring different parts of Canada allowed me to appreciate the country's natural beauty, diversity, and rich history. But what made my exchange programme truly exceptional was the chance to study at one of the world’s top engineering schools. The professors were supportive and engaging and the campus was especially beautiful during spring when the cherry blossoms were in bloom. I highly recommend anyone to consider participating in an exchange programme as it can offer a wealth of new and exciting experiences. Overall, my exchange programme was a fun and memorable experience that I will cherish forever.
Experiential learning is regarded as an integral part of student's learning experience, and internship / industrial training is the most important component of experiential learning, which is compulsory for most of BEng degree programmes.

Students normally spend six to eight weeks in the summer after their third year of study as internships.

During my one-year internship at CLP Power, I have had the opportunity to work on projects related to smart grid technology, which was a key component of the company's efforts to provide reliable and sustainable energy to customers. One of my main tasks was to work on the research and analyze the benefits of implementing a smart grid system in Hong Kong. Through this project, I had gained a deeper understanding of the importance of smart grid technology in improving energy efficiency and reducing carbon emissions. Overall, my internship at CLP Power was a valuable experience that allowed me to acquire practical expertise and skills in the area of electrical engineering.

My internship experience at the Airport Authority Hong Kong was extremely pleasant and rewarding. During my time there, I was responsible for supporting the operations of the Food Ordering System as well as the HKairport Shop. In addition, my teammates and I had the privilege of designing and developing an app to enhance customers' end-to-end experience. All in all, my experience in conducting market research, user acceptance test, inventory tracking, as well as coordinating with vendors in system development, made me more proficient and conscientious person.

During my internship at CEDD, I had the opportunity to gain hands-on experience in site safety management and BIM coordination. This experience has equipped me with a comprehensive understanding of the construction industry, specifically the use of BIM modelling for clash analysis in underground utility construction and work sequence simulation. These skills are essential for my future growth in the field of civil engineering. I am grateful for the valuable learning opportunities provided during my time at CEDD, and I believe this experience has been an enriching and rewarding one.

My internship at Standard Chartered Bank (SCB) was a fruitful experience working with Standard Chartered Bank (SCB). Throughout the internship, I got exposures to many different areas of banking, from working in developer team, to project management, to data analytics team. Besides, we also got to meet the CEO of SCB and gain some insights into the future of FinTech in banking. Another memorable experience was visiting the Mox Bank and learned about the role of Virtual Banks in Hong Kong.

One of the most enriching and captivating summer experiences in my life was my internship at IDG Capital, a top-notch venture capital firm. I learned how to use different professional software programs such as Bloomberg and Capital IQ to predict the value of eVTOL companies. I also gained a deeper understanding of how our investment decisions and corporate valuation were impacted by factors such as greenwashing. I also earned a Bloomberg ESG certificate, which demonstrated my understanding of how businesses should integrate environmental and social concerns into their operations.
Apart from internship, engineering students are encouraged to engage in social service and apply their professional knowledge to provide solutions to real world situations.

The Department of Civil Engineering has established Project Mingde since 2003. Faculty members, students, and alumni engineers have participated in the feasibility study, planning, design and construction of eight built facilities in Guangxi and Sichuan, China, namely Mingde Building; Gewu Building, Zhengdong Jie Kindergarten; Chaoyang Bridge; Mingde Pan Community and Cultural Centre; Jundi Building; Restoration of Tencun Bridge; and Restoration of Wangdong Bridge. There are five built facilities in Hanoi, Vietnam, namely Sanitation facilities at Tan Hung Secondary School; Library of Cuong Chinh Secondary School; Library of Trung Dung Primary School; Sanitation facilities at Trung Dung Secondary School; and Trung Dung Secondary School Swimming Pond. In addition, two other projects are now working in progress, they are Guigang Duling Primary School Restoration and Expansion in Guangxi; and Restoration of Saint Barnabas’ Society and Home Centre in Hong Kong, which is the first local project through which students could help the elderly, the homeless and those in need in the community close to HKU main campus.

Students can take a 6- to 12-month full-time internship in the engineering industry to benefit from the on-the-job training as future professional engineers.

Capstone Experience focuses on the integration and application of knowledge and skills that students have acquired throughout their undergraduate studies. The most important capstone experience for engineering students is the final-year project.

The Professional Preparation Programme aims at facilitating students to make informed career choices and broadening their knowledge in the job market, and to enhance students' employability. Students will be equipped with techniques in writing curriculum vitae and attending interviews, as well as nurturing better social networking and communication skills.
At HKU Engineering, we focus on nurturing students with an all-rounded development. Students are encouraged to acquire hands-on experience and equip themselves with a global outlook. Many of them performed remarkably well in local and international competitions.

**Grand Prize (Category I – An Invention) of the HKIE Innovation Award 2021 (Young Member Group)**
**Race Tech William Kimberley Award in the Formula Student UK 2022 Concept Class competition**
**Top 10 Outstanding Tertiary Student of Hong Kong 2022**

**Silver Award in the ASMPT Technology Award 2023**
**Champion of The ICE HKA G&S Model Building Competition**
**Champion of The HKIE Enginpreneurs Award 2021 – Young Innovators**

**1st runner-up, 2nd runner-up and Best Performance Award in The Robocon 2023 Hong Kong Contest**
**Champion of the CIL.THK Student Day 2022 Competition**
**2nd runner-up and Best Introductory Video Clip in the 2022 Esri Young Scholars Award**

**Grand Champion in Cash Algo Global Trading Challenge**
**Championship of IMechE The Greater China Design Competition 2023**

**Outstanding UI/UX design in Cathay Hackathon 2022**

**First runner-up at Global Grand Challenges Summit 2019 in London**
**An Engineering student project team set the Guinness World Record “The fastest 50m Swim by a Robotic Fish” for the second time**

**Championship and first runner-up at British Model Flying Association 2022 University and Schools Payload Challenges**
Civil Engineering is the science and art of utilising natural resources and power for the beneficial use of mankind. Civil Engineers are responsible for the design, construction and safe-keeping of our infrastructure and built environment. They ensure that our buildings, roads and bridges are safe and effective, our slopes are safe from failures, our stormwater drainage systems are adequate to prevent flooding, our wastewater is collected, and treated properly to protect our environment, and all components of our infrastructure are functioning in a safe, comfortable and sustainable manner.

The 4-year programme provides students with the academic qualification towards the professional status of a Civil Engineer. The Main Subject Areas of studies included:

1. Construction Management
2. Environmental Engineering (e.g. wastewater treatment, solid waste treatment)
3. Geotechnical engineering (e.g. engineering geology, soil mechanics, foundation design)
4. Structural engineering (e.g. analysis and design of concrete and steel structures)
5. Transportation Engineering

The BEng(CompSc) programme is a programme that offers a solid education in the fundamental and essential areas of computing. It is a timely and practical curriculum that is essential for aspiring students and future IT professionals. Upon completion of this curriculum, students will be well-equipped with both basic and advanced knowledge in computer science, which aims to better prepare students to launch their careers in the IT industry and to pursue postgraduate studies in this area.

Computer science is a fast-growing discipline. Its importance is evident in the profound impact that the use of computers has on our lives. Computer science education is now as indispensable as any of the traditional programmes in any established university.

**Highlights of the programme**

Flexibility – Students can use elective credits to satisfy a second major or a minor programme.
Research opportunities – Outstanding students will have the opportunity to undertake research projects supervised by renowned professors.
Capstone Experience – Students have to join an internship in the industry and work on a final project which could be a research-based or software-development or industry-based project.

Students may organise their study of disciplinary elective courses to specialise in one of the following focuses:

- Environmental Engineering
- Smart Transport and Logistics
- Urban Informatics

Career Prospects

Students may organise their study of disciplinary elective courses to specialise in one of the following focuses:

- AI & Robotics courses cover intelligence systems, machine learning, and robotics.
- Big Data Analytics courses focus on data analytics and the application of big data.
- CyberSecurity courses focus on cryptography, cyber attack and defence, applications of blockchain and computer forensics.
- Financial Computing courses focus on the technologies and their applications in the finance and business domain.
- System & Networking courses cover the design and implementation of computer hardware, software, and distributed systems.
- Theoretical Computing Science courses focus on mathematical aspects of computing and are more on theory than practice.

**Career Prospects**

Computer Science graduates are very employable, not just for IT jobs but for other analytical roles too. The problem-solving skills and analytical abilities that our graduates developed during their undergraduate study proved to be very valuable in many areas of endeavour.

Examples include IT professionals in different sectors of society, say banking & finance, building & construction, the government, education, IT & telecommunication, property, and manufacturing, etc.
Electrical and Electronic Engineering (EEE) is a broad engineering field consisting of a wide range of sub-fields such as microelectronics, computers, power engineering, telecommunication, control systems, and signal processing. The Department of EEE offers 3 bachelor’s degree programmes focusing on different sub-fields.

**Computer Engineering (CE)**
- Ambient Computing: Reconfigurable computing/ Energy-efficient computer architecture
- Big Data Processing: Data engineering/ Machine intelligence
- Robotic & Autonomous Systems: Humanoid robots / Autonomous machines

**Electrical Engineering (EE)**
- Smart Power Systems: Power systems / Renewable energy / Smart grids
- Modern Electric Transportation: Electric railways / Electric vehicles / Industrial applications
- Intelligent Built Environment: Energy-efficient lighting / Smart buildings

**Electronic Engineering (ElecE)**
- Nanoelectronics: Circuits & IC design / Fiber optics / Imaging / Biophotonics
- Next-generation communications: WIFI / 5G 6G / Internet of things / Cloud networks
- Data and AI systems: Multimedia signals & applications / Electronic commerce / Data analytics

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**“FOCUS” of the programme**

**Computer Engineering (CE)**
- Government, Transportation and Public Utilities
- Technology and Finance Companies
- Further Studies

**Electrical Engineering (EE)**
- Smart Power Systems: Power systems
- Modern Electric Transportation: Electric railways
- Intelligent Built Environment: Energy-efficient lighting

**Electronic Engineering (ElecE)**
- Nanoelectronics: Circuits & IC design
- Next-generation communications: WiFi
- Data and AI systems: Multimedia signals & applications

**“FOCUS” of the programme**

**Career Prospects**
- Government, Transportation and Public Utilities
- Technology and Finance Companies
- Further Studies

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**Department of Electrical and Electronic Engineering**

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**BEng in**

**Industrial Engineering and Logistics Management**

BEng(IELM) focuses on technology and management tools which integrate the whole lifecycle of product and service design and development, procurement, operations, and logistics from raw materials to customer satisfaction. This programme aims at developing students’ ability to acquire the relevant skills for the global business environment, together with an integrated view towards problem solving in industrial, logistics and service systems.

Students will learn not only to work as good team players, but also to acquire an understanding of value-adding business activities and the necessary entrepreneurial skills to identify potential opportunities for organisations. Graduates of this programme are expected to have a keen awareness of career growth, challenges and opportunities, as well as a strong desire to be future leaders who are achievement-oriented and far-sighted.

**“FOCUS” of the programme**

**Career Prospects**
- Logistics Engineering
- Smart Transport and Logistics
- Systems Analytics

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**Department of Industrial and Manufacturing Systems Engineering**

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Email: imse@hku.hk
Website: https://www.imse.hku.hk
Mechanical engineering plays a vital role in all engineering systems that involve moving parts, such as aeroplanes, buildings, automobile, medical equipment, power plants, robots, to name just a few.

The degree of BEng in Mechanical Engineering aims to train up our graduates for the prosperous professional paths open to them. It is broadly based to allow students to acquire a basic engineering science knowledge, such as thermodynamics, fluid mechanics, solid mechanics, materials technology, dynamics & control. It is also flexible enough to enable students to specialize in areas of their own interest for instance aeronautical engineering, biomedical engineering, control & robotic, energy & environment, mechanics & materials, nanotechnology, product design & manufacture as well as thermo-fluids for developing the specific knowledge and career profile.

HKU offers the BEng(BME) degree through its Faculty of Engineering and LKS Faculty of Medicine. This programme aims to nurture the next generation of engineers, equipping them to enhance health and quality of life through innovative engineering designs and principles. Rooted in a robust interdisciplinary framework encompassing basic sciences, mathematics, engineering, and life sciences, the curriculum spans various contemporary BME disciplines and provides diverse experiential learning opportunities. Students gain expertise in applying engineering principles to advance biomedical practices and research, while also fostering a sense of professional, ethical, and social responsibility towards health-related matters. The BEng(BME) programme fosters well-rounded engineers who will contribute significantly to the betterment of society’s well-being.

Students may organise their study of disciplinary elective courses to specialise in one of the following focuses:

- Robotics, Drones and Control
- Aerospace Engineering
- Intelligent Built Environments
- Materials Science and Engineering
- Environmental Engineering
- Energy Engineering

Career Prospects

- Manufacturing
- Transport & public utilities
- Building, construction & consulting firms
- Government
- Finance and insurance

“FOCUS” of the programme

HKU FACULTY OF ENGINEERING | BEng in ME

Mechanical Engineering

Department of Mechanical Engineering

Contact No : (852) 3917 2635
Email : mech@hku.hk
Website : https://www.mech.hku.hk/

HKU FACULTY OF ENGINEERING | BEng in BME

Biomedical Engineering

Biomedical Engineering Programme

Contact No : (852) 3917 2803
Email : bmeengg@hku.hk
Website : https://www.engineering.hku.hk/bmeengg/
The BEng in Engineering Science programme is a unique science-based programme that aims at preparing future engineers and leaders of innovation who have the solid engineering skills and in-depth interdisciplinary knowledge needed to take on many of the global challenges that humankind faces. This programme adopts a major/minor structure in which students select one of the five majors, and then pursue a second major in one of the remaining four majors, or a second major and/or minor(s) offered by the Faculty of Engineering or other faculties. This programme is a special programme of HKU Engineering, and it is the most flexible programme in the Faculty of Engineering. This is a multi-disciplinary programme providing a wide range of career prospects to nurture future leaders of innovation. Besides, the small cohort size with professors pooled from all engineering departments, students are likely to build a strong network for their professional development.

Flexible Multi-disciplinary Curriculum

<table>
<thead>
<tr>
<th>Options for Electives:</th>
<th>BEng(EngSc) = BEng +</th>
<th>Chemistry</th>
<th>Statistics</th>
<th>Computer Science</th>
<th>Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>+ Mathematics</td>
<td>+ Data Science</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>+ Regional Studies</td>
<td>+ Global Studies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum of credits</td>
<td>90</td>
<td>96</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“FOCUS” of the programme

FinTech Focus with Essential Legal Studies

Students have to take at least two legal subjects offered by the Faculty of Law that are related to finance and technology.

Career Prospects

Graduates of this programme are expected to become FinTech professionals, leaders in the FinTech industry, and researchers in the FinTech discipline. They could take up a wide range of positions in FinTech, IT, Finance, and regulatory compliance, or even have their own start-ups. The finance and IT industries have a wide range of jobs for this talent group such as blockchain developer, apps developer, compliance expert, cybersecurity analyst, etc.

Some may choose to continue their studies by pursuing a master or doctoral degree in Hong Kong or overseas.
BEng in Data Science and Engineering

Fast emerging data science and engineering technologies such as data analytics, artificial intelligence, and big data infrastructure boost the transformative impact of big data on businesses, industries and society.

The BEng(DS&E) programme is a professional degree in Data Science and Engineering offered by the Department of Computer Science, with support from the Department of Statistics and Actuarial Science, Department of Mathematics, and Faculty of Law. The curriculum is built upon a fine combination of foundation courses in data science, computing, mathematics, statistics, and law, and is designed to provide students with advanced training in both theory and practice in Data Science and Engineering. It is also unique in its emphasis on data privacy, ethical and legal issues for the data science profession, and privacy-preserving techniques. Students may also pursue a minor in a data-intensive field, thus bridging domain-specific knowledge with data science and engineering skills.

“FOCUS” of the programme

- Privacy-awareness: Students will be equipped with data security knowledge, in connection with the protection of data privacy.
- Data-centric techniques: Various analysis techniques for different types of data (e.g. imaging data, IoT data, and diverse data obtained from the Internet of Everything (IoE)) will be introduced.
- Domain-specific minors and capstone experience: We provide an option for students to take a minor in a specific domain, e.g., GIS in Geography, BIM in architecture, and biomedical data analysis. Students will demonstrate their data science skills and how data science can benefit a selected domain through the capstone project.

Career Prospects

This programme is built to nurture professionals equipped with core knowledge and technologies in data science and practical training in data engineering, and capable and passionate in driving different disciplines to excel in the era of big data. It provides a solid foundation for students pursuing careers and research in the data science discipline.

The programme gives students a new and exciting career choice in the fastest-growing job positions like data engineer/architect, data scientist, data analyst, machine learning engineer, big data engineer, business analyst, and information security analyst.

Department of Computer Science

Website: https://datasce.cs.hku.hk/

Faculty of Engineering

Website: https://www.ugadmissions.engg.hku.hk/gebp

Contact No: (852) 2859 2180
Email: enquiry@cs.hku.hk

Contact No: (852) 3917 2803
Email: enggugad@hku.hk

Bachelor of Engineering/Bachelor of Engineering in Biomedical Engineering

Bachelor of Business Administration

University and Engineering core courses

Year 1

- University and Engineering core courses
- Civil Engineering
- Computer Science
- Electronic Engineering
- Mechanical Engineering
- Computer Engineering
- Electrical Engineering
- Industrial Engineering and Logistics Management
- Biomedical Engineering

University and Engineering disciplines courses

Year 2 - 4

- Bachelor of Engineering/Biomedical Engineering study programme requirements and receive BEng degree

Complete Engineering programme requirements and receive BEng degree

By end of Year 4

Study BBA on self-financing basis and receive BBA degree

Year 5

- Study 9 business courses from 5 major options:
  - Finance
  - Marketing
  - Information Systems and Analytics

- Major in Entrepreneurship, Design and Innovation (Candidates must undergo a selection process arranged by the Programme Coordinator for declaring this major)

- Major in Finance

- Major in Human Resource Management

- Major in Information Systems and Analytics

- Major in Marketing

The Faculty of Engineering and the HKU Business School jointly offer a Global Engineering and Business Programme (356937). Students can receive two degrees, namely Bachelor of Engineering and Bachelor of Business Administration after the completion of five years of study at HKU.

Highlights of the programme

- This is an interdisciplinary programme in which students will acquire professional knowledge in both Engineering and Business from a global perspective.
- Students will undertake the first four years of study focusing in BEng or BEng(BME) curriculum, with a number of courses in Business. On successful completion of the degree of BEng or BEng(BME) with a Second Class Honours and the prescribed Business courses, students may proceed to the fifth year of study leading to the degree of BBA, in one of the following majors:
  - Major in Entrepreneurship, Design and Innovation (Candidates must undergo a selection process arranged by the Programme Coordinator for declaring this major)
  - Major in Finance
  - Major in Human Resource Management
  - Major in Information Systems and Analytics (Note: Major in ISA is not open to candidates of BEng in Computer Science)
  - Major in Marketing

- The majority of BEng graduates will work in the engineering sector, with other students serving the societies in the business, education, social and community sector. Around 16% of the BEng graduates will pursue further studies in Hong Kong or overseas. At the same time, as BBA graduates, students can also pursue a career in fields such as accounting, advertising, banking, brand management, customer relationship management, finance, human resource management, information systems, investment, marketing research and marketing management.

- Fast emerging data science and engineering technologies such as data analytics, artificial intelligence, and big data infrastructure boost the transformative impact of big data on businesses, industries and society.

- The curriculum is built upon a fine combination of foundation courses in data science, computing, mathematics, statistics, and law, and is designed to provide students with advanced training in both theory and practice in Data Science and Engineering. It is also unique in its emphasis on data privacy, ethical and legal issues for the data science profession, and privacy-preserving techniques. Students may also pursue a minor in a data-intensive field, thus bridging domain-specific knowledge with data science and engineering skills.
Minimum entrance requirements to HKU Engineering:

Applicants with other local/international/national qualifications will be considered on an individual merit basis. Applicants for BEng, BEng(BME) and GEBP are required to have good grades in Mathematics and Physics; applicants for BEng(EngSc) are required to have good grades in Mathematics and Biology/Chemistry/Physics; and applicants for BEng(FinTech) and BEng(DS&E) are required to have good grades in Mathematics. Examples of some common qualifications are:

- Local graduates/final-year students of a recognised full-time Associate Degree (AD) or Higher Diploma (HD) programme at Hong Kong institutions are welcome to apply for admissions to the third year of BEng programmes in the DAS.

### JUPAS Route

**BEng Programmes [56963]**

<table>
<thead>
<tr>
<th>HKDSE Subject</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Subject</td>
<td>3</td>
</tr>
<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Chinese</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Studies / Citizenship and Social Development</td>
<td>2 / Attained</td>
</tr>
<tr>
<td>Elective Subject</td>
<td></td>
</tr>
<tr>
<td>Physics/Combined Science with Physics component</td>
<td>3</td>
</tr>
<tr>
<td>Another elective subject</td>
<td>3</td>
</tr>
</tbody>
</table>

Level 3 in Extended Module 1 or 2 of Mathematics is preferred but not required.

**BEng(DS&E) [56262]**

<table>
<thead>
<tr>
<th>HKDSE Subject</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Subject</td>
<td>3</td>
</tr>
<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Chinese</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Studies / Citizenship and Social Development</td>
<td>2 / Attained</td>
</tr>
<tr>
<td>Elective Subject</td>
<td></td>
</tr>
<tr>
<td>Extended Module 1 or 2 of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Physics/Combined Science with Physics component</td>
<td>3</td>
</tr>
<tr>
<td>Another elective subject</td>
<td>3</td>
</tr>
</tbody>
</table>

Level 3 in Extended Module 1 or 2 of Mathematics is preferred but not required.

**BASc(FinTech) [56248]**

<table>
<thead>
<tr>
<th>HKDSE Subject</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Subject</td>
<td>4</td>
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<tr>
<td>English</td>
<td>3</td>
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<tr>
<td>Chinese</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Studies / Citizenship and Social Development</td>
<td>2 / Attained</td>
</tr>
<tr>
<td>Elective Subject</td>
<td></td>
</tr>
<tr>
<td>Another 2 elective subjects</td>
<td>3</td>
</tr>
</tbody>
</table>

Candidates with level 4 in English Language, if admitted, will be required to take 6 additional credits in Core University English to complete their degree studies.

**BEng(EngSc) [56951]**

<table>
<thead>
<tr>
<th>HKDSE Subject</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Subject</td>
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<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Chinese</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Studies / Citizenship and Social Development</td>
<td>2 / Attained</td>
</tr>
<tr>
<td>Elective Subject</td>
<td></td>
</tr>
<tr>
<td>Chemistry/Combined Science/ Biology/Physics/Integrated Science</td>
<td>3</td>
</tr>
<tr>
<td>Another elective subject</td>
<td>3</td>
</tr>
</tbody>
</table>

Level 3 in Extended Module 1 or 2 of Mathematics is preferred but not required.

**BEng(BME) [56925]**

<table>
<thead>
<tr>
<th>HKDSE Subject</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Core Subject</td>
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</tr>
<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Chinese</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Studies / Citizenship and Social Development</td>
<td>2 / Attained</td>
</tr>
<tr>
<td>Elective Subject</td>
<td></td>
</tr>
<tr>
<td>Biology, Chemistry, Physics, Combined Science with Biology component, or with Chemistry component, or with Physics component</td>
<td>3</td>
</tr>
<tr>
<td>Another elective subject/ Extended Module 1 or 2 of Mathematics</td>
<td>3</td>
</tr>
</tbody>
</table>

**GEBP (i.e. BEng/BEng(BME) & BBA Double Degree) [56837]**

<table>
<thead>
<tr>
<th>HKDSE Subject</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Subject</td>
<td>4</td>
</tr>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Chinese</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Studies / Citizenship and Social Development</td>
<td>2 / Attained</td>
</tr>
<tr>
<td>Elective Subject</td>
<td></td>
</tr>
<tr>
<td>Physics/Combined Science with Physics component</td>
<td>3</td>
</tr>
<tr>
<td>Another elective subject</td>
<td>3</td>
</tr>
</tbody>
</table>

Level 3 in Extended Module 1 or 2 of Mathematics is preferred but not required.

### Non-JUPAS Route

Applicants with other local/international/national qualifications will be considered on an individual merit basis. Applicants for BEng, BEng(BME) and GEBP are required to have good grades in Mathematics and Physics; applicants for BEng(EngSc) are required to have good grades in Mathematics and Biology/Chemistry/Physics; and applicants for BEng(FinTech) and BEng(DS&E) are required to have good grades in Mathematics. Examples of some common qualifications are:

- GCE A-Level
- International Baccalaureate (IB)
- Indian Board Examination
- STPM/UEC under the Malaysian examination system
- Indonesian Examination System
- Canada Provincial Examinations
- SAT/Advanced Placement (AP) Test under the US system
- Associate Degree/Higher Diploma

### Direct Admissions Scheme (DAS)

Local graduates/final-year students of a recognised full-time Associate Degree (AD) or Higher Diploma (HD) programme at Hong Kong institutions are welcome to apply for admissions to the third year of BEng programmes in the DAS.
Engineering Society, which was established in 1913, is the oldest faculty-based society at the University of Hong Kong.

Engineering Society has always been an important part of the Faculty. Apart from that, every engineering student is a member of the Society.

Engineering Society acts as a bridge between all engineering students, the Society and the Faculty. The Society also aims to serve all members through diverse activities and comprehensive welfare. From its earliest days, the Society was instrumental in building links with the industry and engineering professionals in Hong Kong.

Inheriting this tradition, the Engineering Society organises regular activities for members both for academic and recreational purposes. The Society also maintains strong links with professional bodies such as the Hong Kong Institution of Engineers.