Why HKU Engineering?

HKU is one of the best universities in Hong Kong, Asia, and the world.

We have a Long and Glorious History.

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.

We have the Strongest Alumni Base.

We have the Highest Employment Rate among any UGC-funded universities. Our graduate employment rate was 98.7% in 2020. We have graduated the most engineers in Hong Kong with a strong network of 20,000+ alumni.

We stand with the Top Universities in the world

HKU ranked 1st in Hong Kong, 4th in Asia, and 30th in the world.

Source: Times Higher Education (THE) World University Rankings 2022 and Asia University Ranking 2021

HKU ranked 1st in Hong Kong, 4th in Asia, and 22nd in the world.

Source: Quacquarelli Symonds (QS) World University Rankings 2022

Professional Recognition

Like Law, Medicine and Dentistry, studying for Engineering is leading to a professional degree in Hong Kong. All programmes under the Bachelor of Engineering [BS9663] and Bachelor of Engineering in Biomedical Engineering [BS9692] and Bachelor of Engineering/Bachelor of Engineering in Biomedical Engineering and Bachelor of Business Administration [BS9797] 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 recognized 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.

We admit the Best Students

We excel in Research

We have

4 Chinese Academy of Engineering (CAE) Academicians
(50% of sector total)

and

13 Chinese Academy of Sciences (CAS) Academicians
(41.9% of sector total)

Source: https://www.cpag.hku.hk/facstaff/research

Largest non-local students headcount

Largest outgoing exchange students headcount

of any UGC-funded institution.
### Flexible Programme Structure

The Bachelor of Engineering (BEng), Bachelor of Engineering in Biomedical Engineering (BEng(BME)), Bachelor of Engineering in Data Science and Engineering (BEng(DS&E)) and Bachelor of Engineering in Data Science and Engineering (BEng(ME)) are four-year broad-based, comprehensive and flexible engineering programmes while the Global Engineering and Business Programme (GEBP) (BEng) 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.

### BEng in Biomedical Engineering (BEng(BME)) (BEng)

**Year 1** Engineering Core Courses

**Year 2-4** Advanced Discipline Courses

Declare Minor before Year 4

### BASc in Financial Technology (BASc(FinTech))

**Year 1-2** Engineering and Discipline Core Courses

**Year 3-4** Advanced Discipline Courses

Declare 2nd Major and/or Minor(s) before Year 4

### BEng in Data Science and Engineering (BEng(DS&E))

**Year 1-2** Engineering and Discipline Core Courses

**Year 3-4** Advanced Discipline Courses

Declare 2nd Major and/or Minor(s) before Year 4

### Global Engineering and Business Programme (which leads to Bachelor of Engineering / Bachelor of Engineering in Biomedical Engineering and Bachelor of Business Administration Double Degree) (GEBP)

**Year 1** BEng Common Year 1 "Programme" Selection at the end of Year 1

**Year 2-4** BEng Programmes: BEng(CivEng) - Civil Engineering,BEng(CompSci) - Computer Science, BEng(ECE) - Electronic Engineering, BEng(EMechE) - Mechanical Engineering, BEng(EMS) - Materials Management and Logistics Management, BEng(EI) - Industrial Engineering and Logistics Management, BEng(EEE) - Electrical Engineering, BEng(ElecEng) - Electronic Engineering, BEng(EEE) - Electrical Engineering, BEng(ElecEng) - Electronic Engineering

**Year 5** Study BBA on self-financing basis

Study 9 business courses from 5 major options: Entrepreneurship, Design and Innovation Finance, Business Strategy and Leadership, Information Systems and Analytics, Marketing

Declare 2nd Major and/or Minor(s) before Year 4

### BEng/BE(InSc)/BEng(BME)

**University Requirements:**
- Language Enhancement Courses
- Common Core Courses
- Engineering Core Courses*
- Discipline Requirements:
  - Core courses, elective, capstone experience, internship, engineering training and free electives

**Total:** 40

### BASc(FinTech)

**University Requirements:**
- Language Enhancement Courses
- Common Core Courses
- BASc Core Courses
- Discipline Requirements:
  - Core courses, elective, capstone experience, internship, engineering training and free electives

**Total:** 40

### BEng (DS&E)*

**University Requirements:**
- Language Enhancement Courses
- Common Core Courses
- Engineering Core Courses*
- Discipline Requirements:
  - Core courses, elective, capstone experience, internship and free electives

**Total:** 40

### GEBP (Year 1 to 4*)

**University Requirements:**
- Language Enhancement Courses
- Common Core Courses
- Engineering Core Courses*
- Discipline Requirements:
  - Core courses, elective, capstone experience, internship and free electives

**Business courses from 5 major options:**

**Total:** 47

*With regard to the courses to be taken in the fifth year, please refer to the Regulations and Schedules for the Degree of Bachelor of Business Administration (BBBA) in conjunction with the Degree of Bachelor of Engineering or Bachelor of Engineering in Biomedical Engineering.
**Major and Minor Options**

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(OS&IE) 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.

<table>
<thead>
<tr>
<th>Year of study</th>
<th>BEng(CompSc) / BEng(EngSc) / BEng(OS&amp;IE)*</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>

*Subject to final approval

### 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.

<table>
<thead>
<tr>
<th>Offering Faculties</th>
<th>Examples of Minor Options</th>
</tr>
</thead>
</table>
| Engineering        | • Computer Science  
                    | • Data Science and Engineering  
                    | • Electrical and Electronic Engineering  
                    | • Environmental Engineering  
                    | • Geotechnical Engineering  
                    | • Industrial Engineering and Logistics Management  
                    | • Innovation and Design  
                    | • Mechanical Engineering  
                    | • Urban Infrastructure Informatics  |
| Arts               | • French  
                    | • German  
                    | • Global Creative Industries  
                    | • Japanese Language  
                    | • Korean Studies  
                    | • Music  
                    | • Spanish  |
| Business and       | • Accounting  
                    | • Economics  
                    | • Finance  
                    | • Human Resource Management  
                    | • Information Systems and Analytics  
                    | • Marketing  |
| Economics          | • Actuarial Studies  
                    | • Chemistry  
                    | • Computational & Financial Mathematics  
                    | • Environmental Science  
                    | • Mathematics  
                    | • Physics  
                    | • Risk Management  
                    | • Statistics  |
| Social Sciences    | • Cognitive Science  
                    | • Geography  
                    | • Journalism & Media Studies  
                    | • Sociology  |

**Dean’s Club**

First-year students with excellent academic result admitted to the Faculty of Engineering will receive invitation to join the Dean’s Club. Members of the Club are personally mentored by the Dean of Engineering, and they will be invited to join various academic and social activities, connecting them with industry leaders and widening their exposure to different aspects of engineering. They will also receive the Dean’s Award for Engineering Students to support their overseas exchange and experiential learning activities, so that they will be nurtured as future leaders with unique experience, outstanding visions and exceptional capabilities.

**HKU-Cambridge Undergraduate Recruitment Scheme (Engineering and Computer Science)**

The “HKU-Cambridge Undergraduate Recruitment Scheme (Engineering and Computer Science)” 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 and Bachelor of Arts (Honours) degrees by the University of Cambridge, and the Bachelor of Engineering degree by HKU.

*Only first year students studying for the BEng, BEng(BME), BEng(EngSc) and GEEP are eligible to apply for the Scheme. BASc(FinTech) students are not eligible for the Scheme.
For interdisciplinary hands on and experiential learning:

Tam Wing Fan Innovation Wing

Practical hands-on and experiential learning activities are indispensable in engineering education nowadays. HKU Faculty of Engineering has established Tam Wing Fan Innovation Wing (Innovation Wing), a new iconic landmark with one of the best maker spaces in Hong Kong and in Asia, for creating an atmosphere of Creativity, Openness, and Vibrancy to foster interdisciplinary innovations among students and teachers in Engineering and Technology. Our drive for innovation is further backed by the University Grants Committee and a generous donation from Mr and Mrs Tam Wing Fan.

The two-storeyed Innovation Wing covers 2,460m² of floor area which is located on the 5/F and 6/F of the Hui Oi-Chew Science Building, a strategic and prominent location at HKU, where the University Street connects the original and the new parts of the HKU Main Campus. Situated next to the HKU MTR Station and the buildings of the Faculty of Engineering at the “heart” of the Main Campus, students and future engineers will have more opportunities to develop and actualise ideas, from the whiteboard to the real world, in this state-of-the-art facility.

Dr. C.K. Chui, Director of Tam Wing Fan Innovation Wing of Faculty of Engineering, said, “The Tam Wing Fan Innovation Wing goes beyond an iconic landmark with world-class facilities, it becomes an enabling platform for Engineering undergraduate students where the seeds of young and creative minds will germinate and thrive.”

Turns idea into reality

Innovation Wing is equipped with comprehensive prototyping facilities and equipment for students to turn ideas into reality. The maker space offers a vibrant assembling area that can accommodate more than 100 students to work on their hands-on projects. Surrounding the assembling area is a number of specialised workshops equipped with the state-of-the-art digital controlled facilities such as 3D printing machines, laser cutting and engraving machines, waterjet cutting machine, measuring tools, hand/power toolsets and electronic workbenches, etc. The digital innovation zone offers computer-aid design studio, multimedia and podcast studio, AR/VR studio and special project studios for supporting innovation with digital technology.

Inspiring advanced technology workshops

Innovation Wing also houses a number of thematic workshops for advanced technologies and/or research outcomes from pioneer Engineering projects led by Professors/researchers in the Faculty of Engineering. Workshops with the themes related to healthcare technology, artificial intelligence and robotics, advanced and new materials, smart technology for better living and VR technology etc. are set up in the Innovation Wing. Students have the chance to get in touch with the advanced technology and learn from the Professors who are experts in 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 projection micro stereo lithography technology to produce highly precise parts with a resolution in micron scale.

Sparkling environment for disseminating ideas and achievements

Innovation Wing encourages sharing of ideas and peer learning. Poster hallway, project wall and social media sharing platform are set up for displaying and sharing of inventions, ideas and achievements. A seminar stage with LED wall is located next to a relaxing brainstorming area, and students can exchange ideas by giving technology talks, showcasing their inventive design, and harnessing timely and constructive feedback by peers, teachers, and the public.

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

Innovation Academy
Faculty of Engineering, HKU

HKU Faculty of Engineering is committed to fostering contemporary engineering education for students to contribute to the industry and addressing the changing needs of the community. In keeping with this commitment, the Faculty has established the "Innovation Academy" to provide every student with the opportunities and intellectual inspiration to innovate and pursue their engineering passion.

The Innovation Academy is a hub for attracting and cultivating new generation of talents, not only scholars and researchers, but also industry leaders and influencers. It works like an accelerator for inspiration and implementation.

Inspirational programmes and activities

A series of programmes and activities is designed to capture three goals: Inspire, Equip and Showcase, and to encourage think-out-of-the-box mindset within students. We will also engage teachers, students and stakeholders like industry advisors.

InnoChallenge

It aims to encourage engineering participation in tackling pressing issues of the time for all HKU Engineering students. This problem-based programme develops students’ competencies in acquiring and applying knowledge, problem solving, teamwork, communication, and experimental skills. Professors who are experts in these fields are invited to provide training workshops.

InnoHub

In an increasingly complicated world, there is a high demand of well-rounded talents with holistic education who can comprehend and solve complex problems that transcend disciplines. InnoHub is dedicated to providing a platform to connect students from the ten faculties at HKU for cross-disciplinary collaboration and to prepare them for addressing the grand challenges of the world.

Pitching

This pitching event aims to provide students with opportunities to present their project ideas and recruit prospective teammates and academic advisors. The learning process 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 team and grow their community of interest and passion.

Sharing by innovators

Guest speakers of diverse backgrounds, such as innovators, entrepreneurs, industry partners, researchers or alumni, are invited to share their insights on innovation-related topics and successful stories. The format of the sharing is flexible spanning from talks to one-on-one dialogue to panel discussion.

Workshop on advanced technologies

Tam Wing Fan Innovation Wing houses a number of thematic workshops for advanced technologies and/or research outcomes from pioneering Engineering projects in the Faculty of Engineering. The concept is borrowed from writer-in-residence to create opportunities for active exchange and learning.

Student-initiated Course

"Learning by teaching" helps to train up students’ confidence, organizational and communication skills. The Student-initiated course is a student-run experiential activity to design, develop and teach a course on a technology-related topic under the supervision of a Faculty Advisor. Student teams may propose courses of special interest which are not covered in formal engineering curriculum.

InnoEngineering

The Engineering InnoShow is a showcase carnival that celebrates and demonstrates the outcome of learning and creation at the end of every semester. Students can illustrate their inventive design, demonstrate their research and projects, harness constructive feedbacks from peers, teachers, industry experts and the public through knowledge exchange, and spin their ideas into innovative inventions.

Funding Scheme for student projects and activities

The Funding Scheme for student projects/activities by Tam Wing Fan Innovation Fund and Philomathia Foundation Innovation Fund aims to identify, engage and nurture student projects/activities with creative potential to tackle emerging complex engineering problems in the world. The funded projects/activities should focus on out-of-classroom learning experience with the aims of aligning with the vision and missions of the Faculty of Engineering and the Innovation Academy.

Website:
https://www.innoacademy.engg.hku.hk
Student Exchange Programme

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 go on exchange every year. Some examples of the universities are:

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

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

- **France**
  - CentraleSupélec
  - ESCP Paris
  - Institut National des Sciences Appliquées de Toulouse

- **Finland**
  - Aalto University

- **Denmark**
  - Technical University of Denmark

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

- **Japan**
  - Tohoku University

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

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

- **Spain**
  - University of Navarra

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

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

- **Holly Rastere**
  **BEng in Electrical Engineering**
  **HKU Worldwide Student Exchange Programme in University of British Columbia, Canada**

Professors at the University of British Columbia come from all across the world from different cultures and ethnicities. They paid attention to each and every need of students, from academic studies to students’ personal needs. Besides, UBC’s academic culture intensely focuses on continuous evaluation and class participation is highly encouraged.

- **Angie W°**
  **BEng in Computer Science**
  **University of Tokyo, Japan**

Taking part in the Airbus Japan Business Project, I worked with Aerospace Engineering students to design business models for airlines. We also had the opportunity to visit the Airbus office and learn more about applications of technology in aviation.

In addition, I am participating in the JAXA Satellite Design Contest and the Nikkei Stock League (a virtual stock market competition). I’ve been enjoying a fruitful university life much thanks to this program.

- **Takahiro**
  **BEng in Engineering Science**
  **The Exeter College Summer Programme in University of Oxford, UK**

The summer programme was a fascinating overseas experience where I can study something about engineering or of personal interest. I can also feel the culture in the UK and the study life in Oxford.

- **Nicholas Banyango**
  **BEng in Industrial Engineering and Logistics Management**
  **Northeastern University, USA**

I was very lucky to have an opportunity to go to Northeastern University in Boston, MA. The university has a strong spirit, diverse community, and many opportunities to explore for any taste. As an exchange student, I immediately felt a part of a community. The best part of my academic experience was the interaction with professors and lively in-class discussions which allowed to significantly deepen the understanding of the course topics.

Second, the university had a perfect location with major sites in walking distance proximity. So, in our free time we could easily explore Boston. The Museum of Fine Arts was just across the street and as students we had a free multi-use pass. The highlight of my exchange was going to the Boston Pops’ Holiday Pops concert for Christmas with other exchange students. We could also easily travel to other cities: we took a bus to New York, Philadelphia and Niagara Falls. If you’ve dreamt of visiting New York for Christmas or trying a cheesesteak in Philadelphia, then Boston is a perfect destination for you.
Internship

Experiential learning is regarded as an integral part of students’ learning experience, and internship/industrial training is the most important component of experiential learning, which is compulsory for most of the BEng degree programmes.

Students normally spend six to eight weeks in summer after their third year of study as internship. Common training partners are:
- Boeing Company
- Civil Engineering and Development Department (CEDD)
- CLP Power Hong Kong Limited
- Electrical & Mechanical Services Department (EMSD)
- Gammon Construction Limited
- HK Electric
- HSBC
- IBM
- J.P. Morgan
- Morgan Stanley

Lee Lik-ho, Jacky
BEng in Biomedical Engineering
Summer Internship at St. Paul’s Hospital

I worked at St. Paul’s Hospital as a biomedical engineering intern during summer in which I gained insights in healthcare industry. During the internship, I have learnt the safety requirements and functionality standards of different medical devices, from diagnostics like ultrasound scanner to treatment like infusion pump. I have also acquired hands-on experiences on medical device maintenance by using different testers like electrical safety testers, and vital sign monitor calibrators to check the safety and functionality of the devices. Furthermore, I have learnt how a biomedical engineer plans for installation of new medical devices by comparing the specification, cost, user experiences and other factors to make the best decision for the hospitals and medical professions. These experiences expand my knowledge of biomedical engineering different from academics but as a service provider in hospitals to assist medical professions by ensuring the safety and functionality of medical devices.

Mak Chak-wing
BEng in Computer Science
Internship at NVIDIA Singapore Pte Ltd

With NVIDIA, I have learned deep learning and machine learning from scratch to hatch. I have developed an end-to-end deep learning demonstration application, which includes provisioning infrastructure on the containerization platform and implementing the graphic user interface. Also, I have the chance to have a glimpse at academic research on data mining and machine learning. It is a memorable and challenging internship, helping me to find my pathway in the computer science field.

Yeung Wa
BEng in Industrial Engineering & Logistics Management
Internship at The Airport Authority Hong Kong

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 iAirportShop. 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 a more proficient and conscientious person.

Chu Wing-yan
BEng in Biomedical Engineering
Summer Internship at Nano and Advanced Materials Institute (NAMI)

The summer internship experience in NAMI further reaffirms me to step into the research field. I explored product research working environment and found working with teammates with various academic and cultural backgrounds enjoyable. Product research requires broad, interesting and realistic considerations, with amazing direct daily-life effect. All the experiences ignite my curiosity and creativity, encouraging me to self-propose interesting research for final year project, fueling my passion in research in the future.
Undergraduate Research Fellowship Programme

Academically strong students can undertake research under the guidance and supervision of academics who have a strong research track record and experience in training research postgraduate students, either in HKU or in prestigious overseas institutions like Stanford University, University of Illinois at Urbana-Champaign, Imperial College London, University College London, University of California, Berkeley, The University of Sydney, National University of Singapore and Tsinghua University. Students who perform well under the programme will be considered for early admission to research postgraduate programmes at HKU.

Integrated Study-Work Programme

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.

Service Learning

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. Teachers, 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, Geniu Building, Zhongdong 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 Guiyang Duling Primary School Restoration and Expansion in Guangxi; and School in Sankhuwasabha District of Eastern Nepal.

Leung Chun-hei
BEng in Civil Engineering
Project Mingde – Vietnamese Secondary School Swimming Pond Construction Project 2019

By participating in Project Mingde, we have a better understanding on the construction process and building techniques, such as mixing cement mortar; plastering, tile-laying and suchlike. These practical skills are essential for engineering students in their future career. Apart from learning how to build, we were given opportunities to communicate with the contractors and clients. Progress meetings were held to discuss the construction progress and problems encountered during the work. It was an adventurous and eye-opening experience for me.

Nirmani Narayana
BEng in Electronic Engineering
Undergraduate Research Fellowship Programme at Stanford University, US

Joining the Undergraduate Research Fellowship Programme at Stanford University truly opened my mind into the true impact that research could make and gave me a taste of what it would be like to pursue higher studies.

Capstone Experience

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)

HKU team “BTHOl” won the first place at the first blockchain hackathon in Hong Kong

1st Runner-up of The HKIE Engineering Award 2021 – Young Innovators

Most Creative Idea Award at SG: Digital Wonderland

Champion of the Fifth Louis Vuitton Supply Chain University Contest

Champion of the 2nd Greater China Design Competition

Champion at the Payload Challenge 5 of British Model Flying Association 2019 University and Schools Flight Challenges

An Engineering student project team set the Guinness World Record “The fastest 50m Swim by a Robotic Fish” for the second time

First runner-up at Global Grand Challenges Summit 2019 in London

Best ever result of Hong Kong teams at the 23rd AIAA Design Fly Competition in U.S.A.
Civil Engineering is the science and art of utilizing 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 are 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

**Focus of the programme:**

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

- Environmental Engineering
- Smart Transport and Logistics
- Urban Informatics

**Career Prospects:**

Most of our graduates are employed by:

- Works Departments in the HKSAR Government
- Consultant Firms
- Construction Companies
- Developers

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The BEng(CompSci) 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. On 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 career in the IT industry and/or 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.

**Focus of the programme:**

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

- AI & Robotics
- Big Data Analytics
- Financial Computing
- System & Networking
- Theoretical Computing Science

**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 endeavor.

Examples include IT professionals in different sectors of the society, say banking & finance, building & construction, the government, education, IT & telecommunication, property, and manufacturing, etc.
BEng in Computer Engineering / Electrical Engineering / Electronic Engineering

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 degree programmes focusing on different sub-fields.

**FOCUS of the programme:**

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

**Computer Engineering (CE)**
- Ambient Computing
- Big Data Processing
- Robotic & Autonomous Systems

**Electrical Engineering (EE)**
- Smart Power Systems
- Modern Electric Transportation
- Intelligent Built Environment

**Electronic Engineering (ElecE)**
- Nanoelectronics
- Next-generation communications
- Data and AI systems

**Career Prospects:**
- Government, transportation and public utilities
- Technology and finance companies
- Further studies

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BEng in Industrial Engineering and Logistics Management

BEng(IEM) 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:**

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

- Systems analytics
- Decision analytics
- Robotics and Automation
- Logistics engineering & supply chain management
- Cyber-physical systems

**Career Prospects:**
- Banking and finance
- Consultancy
- Logistics and transport
- Services and manufacturing

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Department of Electrical and Electronic Engineering

Tel: (852) 3917 7093
Email: undergrad-admission@eee.hku.hk
Website: https://www.eee.hku.hk

Department of Industrial and Manufacturing Systems Engineering

Tel: (852) 3917 2584
Email: imee@hku.hk
Website: https://www.imee.hku.hk
BEng in Mechanical Engineering

Mechanical engineering plays a vital role in all engineering systems that involve moving parts, such as aeroplanes, building ventilation, automobiles, medical equipment, power plants, robots, to name just a few. Mechanical engineers invent, design, analyze, operate and develop mechanical systems; they are trained to cope with a variety of challenges and have a very broad career spectrum.

The Department offers choices of guided electives in biomechanical engineering, building services engineering, energy engineering, environmental engineering, materials science & engineering and of course the other general mechanical engineering subjects.

FOCUS of the programme:

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

1. Robotics, Drones and Control
2. Aerospace Engineering
3. Intelligent Built Environments
4. Materials Science and Engineering
5. Energy and Environmental Engineering

Career Prospects:

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

Department of Mechanical Engineering
Tel: (852) 3917 2635
Email: mech@hku.hk
Website: https://www.mech.hku.hk/

Biomedical Engineering Programme

The BEng/BME (6925) degree is offered by the Faculty of Engineering in conjunction with LKS Faculty of Medicine at the University of Hong Kong. The goal of this programme is to cultivate the next generation of engineers who will play an integral role in improving health and quality of life through engineering designs/principles and technological innovations. Built upon a strong interdisciplinary foundation across basic sciences, mathematics, engineering and life sciences, this programme covers a wide scope of modern BME disciplines and a variety of BME-related experiential learning opportunities. Such inclusive training allows students to learn how to apply engineering principles to advance biomedical practices and research, and to establish professional, ethical and social responsibilities on health-related issues.

FOCUS of the programme:

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

- Advanced biomedical signals and systems
- Biomaterials and tissue engineering
- Biomechanics
- Biomedical imaging
- Omics technologies

Career Prospects:

- Global or local biotechnology/medical technology related companies
- Universities
- Hospital
- Public sector
- Start-up
- Further studies (Master or PhD degrees) in Hong Kong or overseas

Tel: (852) 3917 2803
Email: bmeengg@hku.hk
Website: https://www.engineering.hku.hk/bmeengg/
The BEng in Engineering Science, BEng(EngSc), is a unique programme that aims to train future engineers and innovation leaders with solid engineering skills and in-depth interdisciplinary knowledge to meet major global challenges facing mankind. It is a multidisciplinary programme that offers a wide range of career prospects.

Among all the programmes of HKU Engineering, BEng(EngSc) is special. It is the most flexible engineering programme in Hong Kong. It uses a major/minor structure. Students choose one of the five majors, and then study the second major in one of the remaining four majors, or the second major and/or minor(s) offered by the Faculty of Engineering or other faculties.

In this programme, the small cohort of students has support from the professors of all engineering departments. Students can build a strong network for their professional development.

**Highlights of the programme:**

- **Flexible Multi-disciplinary Curriculum**
- **BEng(EngSc) = BEng +**
- **Options for Electives:**
  - 3 units
  - 6 units
  - 9 units
  - 12 units
- **Requirements:**
  - At least 70 credits

**Career Prospects:**

- **Five Majors**
  - Healthcare Engineering
  - Environmental Engineering
  - Materials Engineering
  - Systems Analytics
  - Electrical & Electronic Engineering

- **Subjects**
  - Medical imaging/diagnosis
  - Life science
  - Civil/structural engineering
  - Biomedical engineers
  - Research engineers

- **Possible Careers**
  - Healthcare
  - Medical imaging/diagnosis
  - Life science
  - Civil/structural engineering
  - Biomedical engineers
  - Research engineers

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The BASc in Financial Technology degree programme, which is hosted by the Department of Computer Science, is one of the six BASc programmes that aims at nurturing future leaders with interdisciplinary knowledge and skills to address the contemporary and future challenges of the ever-changing world.

The main objective of the programme is to nurture financial technologists and entrepreneurs with essential knowledge in finance, technology, and regulations for taking up a leading role in innovation and applications of Financial Technology. The programme combines subjects on computing, finance, and policies and regulations to give students a thorough grounding in the FinTech discipline. Besides discipline focus courses, students are required to take three cross-disciplinary courses that focus on leadership training, foundation of knowledge, and data analysis. Moreover, there are internship opportunities for students to put theory into practice.

**Highlights of the programme:**

- **Interdisciplinary Knowledge and Skills**
- **Scholarships in FinTech**
  - The HKU-SCF FinTech Academy offers up to eight entrance scholarships, each at the value of $50,000 and renewable up to $200,000, exclusively for BASc in FinTech students with outstanding academic performance.
- **Enrichment and Research Opportunities**
  - Students have to take at least two legal subjects offered by the Law Faculty 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.

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**Department of Computer Science**

Tel: (852) 2859 2180
Email: enquiry@cs.hku.hk
Website: https://www.cs.hku.hk/ft-tech
BEng in Data Science and Engineering

(To be launched in Sept 2022)

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&IE) 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.

Highlights 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 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 career 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
Tel: (852) 2859 2180
Email: enquiry@cs.hku.hk
Website: https://www.cs.hku.hk/programmes/beng-datasc/

Programme subject to final approval
# Admissions Requirements

**BEng Programmes (JS6963), BEng(EngSc) (JS6951), BEng(BME) (JS6925), BASc(FinTech) (JS6248), BEng(DS&E) (JS6262)** & **GEBP (i.e. BEng/BEng(BME) & BBA Double Degree) (JS6937)**

## JUPAS Route

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

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

## BASc(FinTech) [JS6248]

<table>
<thead>
<tr>
<th>HKDSE Subject</th>
<th>Level</th>
<th>Core Subject</th>
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<th>Mathematics</th>
<th>Liberal Studies</th>
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<tbody>
<tr>
<td>Core Subject</td>
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<td>English</td>
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<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Elective Subject</td>
<td></td>
<td>Physics/Combined Science with Physics component</td>
<td>3</td>
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</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.

## Direct Admissions Scheme (DAS)

<table>
<thead>
<tr>
<th>HKDSE Subject</th>
<th>Level</th>
<th>Core Subject</th>
<th>English</th>
<th>Chinese</th>
<th>Mathematics</th>
<th>Liberal Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Subject</td>
<td></td>
<td>English</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Elective Subject</td>
<td></td>
<td>Chemistry/Combined Science/ Biology/Physics/ Integrated Science</td>
<td>3</td>
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<td>2</td>
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<tr>
<td></td>
<td>Level</td>
<td>Another elective subject</td>
<td>3</td>
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</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(EngSc), BEng(BME) and GEBP are required to have good grades in Mathematics and Physics, while applicants for BASc(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)
- India Board Examination
- STPM/JUEC under the Malaysian examination system
- Indonesian Examination System
- Canada Provincial Examinations
- SAT/Advanced Placement (AP) Test under the US system
- Associate Degree/Higher Diploma

*Subject to final approval.

Graduates/final-year students of a recognised full-time Associate Degree (AD) or Higher Diploma (HD) programme of at least two years in duration from a community college or Hong Kong Institute of Vocational Education (IVE) under Vocational Training Council (VTC) in Hong Kong are welcome to apply for admissions to the third year of BEng programmes in the DAS.
Engineering Society

Engineering Society, which was established in 1913, is the oldest faculty-based society in 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 at serving 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, Engineering Society, organizes regular activities to members both for academic and recreational purposes. The Society also maintains strong links with professional bodies such as the Hong Kong Institution of Engineers.

Contact:
Email: engsoc@hku.hk