College of Engineering

World Recognition
Quacquarelli Symonds (QS) World University Rankings
Worldwide (2020) 52nd
By Subjects (2019) Top 100
- Architecture/ Built Environment
- Civil & Structural Engineering
- Computer Science & Information Systems
- Electrical & Electronic Engineering
- Materials Science
- Mechanical, Aeronautical & Manufacturing Engineering

Academic Ranking of World Universities (ARWU) (2019)
By Subjects
Top 50
- Automation & Control
- Biomedical Engineering
- Computer Science & Engineering
- Instruments Science & Technology
- Metallurgical Engineering
- Nanoscience & Nanotechnology
- Telecommunication Engineering

Top 100
- Civil Engineering
- Electrical & Electronic Engineering
- Materials Science & Engineering
- Mechanical Engineering
- Transportation Science & Technology

City University of Hong Kong
11th Best Global Universities for Computer Science
15th Best Global Universities for Engineering
31st Best Global Universities for Materials Science
Bachelor’s Degree

For admission to the 4-year bachelor’s degree, depending on the admission model of individual departments, students will either be enrolled in a major directly, or be enrolled to a department and choose a major within the department after completing their first year of study.

Department of Architecture and Civil Engineering

This department-based admission option provides flexibility for students who require more time to explore their interests before making major choices. Students will be admitted to the Department in their first year without declaring a major. They will have a free choice of majors (i.e. Architectural Engineering, Civil Engineering, or Surveying) offered by the Department after their first-year study.

Architectural Engineering

This major is fully accredited by the Hong Kong Institution of Engineers (HKIE) as a recognized degree for applying professional engineer qualification. The major aims to provide students with the academic background necessary for a professional architectural and building services engineer. They will be able to manage the design, manufacturing, installation, commissioning and maintenance of various building services engineering systems including air-conditioning systems, electrical services, fire protection systems, and pipe systems. They will also be equipped with the concept of integration between various disciplines within the architectural and building services engineering and also the other trades of the building industry.

Civil Engineering

(with 2 streams in Structural Engineering/Infrastructure and Urbanism)

This major is fully accredited by the Hong Kong Institution of Engineers (HKIE) as a recognized degree for applying professional engineer qualification. This major aims at equipping students with a solid foundation to work as a civil engineer. It covers a wide spectrum of areas, for example, construction technology and materials, engineering management, environmental engineering, geotechnical engineering, green urbanism, hydraulic engineering, structural engineering, and transportation engineering. There are two specializations in the major: structural engineering, and infrastructure & urbanism. Graduates are expected to work as civil/structural engineers, geotechnical engineers, construction and site engineers, construction project managers, building engineers, transport engineers, etc. in private and government sectors. There are opportunities for further studies and research at graduate levels in Hong Kong, Mainland China and overseas.

Surveying

This Hong Kong Institute of Surveyors (HKIS) and The Royal Institution of Chartered Surveyors (RICS) accredited major aims to provide students with the necessary skills to i) participate in real estate and infrastructure development, ii) analyse building development proposals, iii) appraise contemporary building science and engineering techniques, iv) advise on appropriate means of procurement; v) pursue financial control of construction projects and vi) apply a multi-disciplinary approach to manage construction processes.

Department of Biomedical Engineering

This major aims to pursue excellence in education, research and innovation through the fusion of engineering with life sciences for the advancement of human health. Students will be prepared to apply their skills to a variety of challenges in their chosen fields, to solve problems in the biomedical engineering related professions, to make decisions that are socially and ethically responsible, and to build and expand upon their undergraduate foundations by engaging in learning opportunities throughout their careers.

Graduates from this major are expected to possess expertise that will address the increasing public concerns and demands on medical diagnostics and therapeutic treatments, biomedical instruments, food safety and quality, advancement in pharmaceutical and health maintenance products, as well as the awareness for human health and wellness.

Department of Computer Science

The major aims to provide the best possible undergraduate education with a well-balanced emphasis on computer science theories, practical hands-on development skills, as well as software engineering know-how that are necessary for successful careers as professional software developers, system analysts, system architects and technology officers. Our study streams (Data Science, Information Security, Multimedia Computing, Software Engineering and Project Management, and Artificial Intelligence) allow students to further specialize in different areas of expertise. In addition, the major has a mandatory placement component that allows students to gain real-world experience, which will provide a significant edge when students look for employment after graduation.
Department of Electrical Engineering

(852) 3442 7740  eeedept@cityu.edu.hk  www.ee.cityu.edu.hk

Computer and Data Engineering
The aim of this major is to provide students with a strong foundation and broad skills in the computer and data technologies. Students will be equipped with the theoretical and practical aspects of computer systems. The curriculum encompasses hardware and software design, multimedia technologies, data analytics and security, cloud computing systems, and artificial intelligence. Upon completion of the major, students will be sufficiently prepared for employment, and to pursue postgraduate studies and engage in life-long learning.

*Electronic and Electrical Engineering
The aim of this major is to provide students with a strong foundation in advanced electronics and electrical technologies. Students will be exposed to the latest developments in wireless communications & data technology; terahertz & optical technologies; photonic electronics & sensors; smart control & power systems; and bioelectronics & bioinformatics. Our education will transform students into well-trained professional engineers with the skills and vision to progress further in their career path in this rapidly changing knowledge-based economy. The major will also equip students to pursue postgraduate studies.

* Charge of major title from “Electronic and Communication Engineering” to “Electronic and Electrical Engineering” is subject to approval of the University.

Information Engineering
This major aims to give students a balanced understanding of the theory and applications of information engineering, which encompasses networking & telecommunications; algorithms & software; cybersecurity & forensics; artificial intelligence & big data; and signal & image processing. It offers all-round education, which nurtures independent thinking, creativity, and various soft skills. Upon completion of the major, graduates will be sufficiently prepared for further studies or employment in a wide range of economic sectors, mainly technology, but also business, banking, finance and trading in Hong Kong and the Asia-Pacific region.

Department of Mechanical Engineering

(852) 3442 2067  mmegea@cityu.edu.hk  www.cityu.edu.hk/mne

Mechanical Engineering
This major aims to provide a well-structured curriculum that combines education, research and development of innovative technologies which enables students to tackle engineering problems in mechanical-related areas efficiently and independently. It equips students with critical thinking, independent research abilities, qualitative and quantitative analysis capacities and also prepares them for professional employment in areas such as engineering design of materials, dynamical and control analysis, automation engineering and micro & nano technologies.

Nuclear and Risk Engineering
This major aims to equip students with multi-disciplinary knowledge in nuclear and risk engineering to meet the growing demands in low carbon power generation, healthcare and risk engineering sectors. Graduates can work in a broad spectrum of related professions or industrial sectors, such as nuclear power industry, materials engineering, nuclear medicine related fields, radiation protection, environmental protection, nuclear radiation equipment industry, risk assessment in the financial sector and also disaster management.

Department of Materials Science and Engineering

(852) 3442 2085  mse@cityu.edu.hk  www.cityu.edu.hk/mse

Materials Science and Engineering
JUPAS Catalogue No. JS1210

Students of the Materials Science and Engineering major acquire knowledge to solve materials-related problems in engineering processes. Graduates with a materials-related degree are adequately prepared to pursue a wide range of careers in engineering. Upon graduation, they will become graduate members of the Hong Kong Institute of Engineers (HKIE) and professional engineers after completing the professional assessment.
Top-up Bachelor’s Degree

Department of Architecture and Civil Engineering

(852) 3442 7669  acdept@cityu.edu.hk  www.aec.cityu.edu.hk

(For Advanced Standing II admission only)

Architectural Studies

This full-time Hong Kong Institute of Architects (HKIA) accredited bachelor’s degree major provides articulation for holders of an associate degree or higher diploma in Architectural Studies. It is designed to enable progression towards professional registration as an architect in Hong Kong and to encourage higher academic study and specialisation. Graduates are highly sought after as building professionals in the construction and design industries as they are able to integrate diverse knowledge in advanced technology, design and construction management, to produce innovative and creative architecture.

Department of Systems Engineering and Engineering Management

(852) 3442 9321  seeeng@cityu.edu.hk  www.cityu.edu.hk/seeem

(For Advanced Standing admission only)

Systems Engineering and Management

The major aims to nurture students’ analytic skills in understanding, analysing, managing and improving modern enterprises and systems, grounded in engineering principles and scientific methods. The targets of management and improvement include the operations and processes of an enterprise and its projects, products and services. An enterprise under consideration can be an engineering, business, government or service-oriented organisation.

Students of this major are trained to become an analytic and versatile engineer with the skill to effect changes in globalized production and boundary-less information flow in modern enterprises.

Associate Degree

Department of Architecture and Civil Engineering

(852) 3442 7669  acdept@cityu.edu.hk  www.aec.cityu.edu.hk

Architectural Studies

The programme prepares students for a role that is complementary to that of an architect, in design and the production of information for building projects. It provides a broad-based academic foundation for further academic and career development. Graduates have the opportunity to be admitted to full-time architectural studies degree programmes offered by CityU and other local institutions, or pursue further study with credit transfers in overseas universities.

Division of Building Science and Technology

(852) 3442 7089  binfo@cityu.edu.hk  www.cityu.edu.hk/bst

Building Services Engineering

This programme is accredited by the Hong Kong Institution of Engineers (HKIE). Upon completion of this programme, students are able to perform practical works in building services engineering under the supervision of a professional building services engineer. This programme aims to equip students with knowledge of design, installation, commissioning and maintenance of mechanical and electrical systems in buildings. The curricula focus on building physics, thermal engineering, fluid mechanics, engineering mathematics, heating, ventilation and air-conditioning, electric services, plumbing and fire services and industrial training.

Construction Engineering and Management

This programme is accredited by both the Hong Kong Institution of Engineers (HKIE) and the Hong Kong Institute of Construction Managers (HKICM). It is also recognized by the Chartered Institute of Building (CIOB). The programme aims to provide students with a broad-based academic foundation and practical skills in construction engineering and construction management for entering into an international workplace or articulation to bachelor’s degree programmes in local and overseas universities. The programme provides opportunities for students to develop intellectual abilities and transferable skills to deal with problems creatively, to communicate, interact and work well with people, and to operate across disciplines and professional boundaries.

Surveying

This programme is accredited and recognized by the Hong Kong Institute of Surveyors (HKIS) as a cognate sub-degree programme for admission to their Assessment of Professional Competence (APC) through which graduates of this programme can get qualified. Upon completion of this programme, students are expected to perform practical surveying works and become an associate member and further, a corporate member of the HKIS. This programme aims to provide students with a round academic foundation and practical skills in surveying for entering into the local construction and property industries. It equips them with multiple intelligences to discover and solve problems innovatively. After completion of this programme, students are encouraged to pursue bachelor’s degrees in local and overseas universities.
Joint Bachelor’s Degree Programmes

Joint Bachelor’s Degree Programmes provide students with an international undergraduate educational experience. Students will spend two years at CityU and two years at the partner university. On completion of the curriculum requirements of both universities, students will earn two bachelor’s degrees - one from CityU and one from the partner university.

City University of Hong Kong
Columbia University

Curriculum Design

Year 1 CityU  Year 2 CityU  Year 3 Columbia U  Year 4 Columbia U

Eligibility

• Studying the 4-year degree majoring in Computer Science
• Complete Year 1 with a minimum CGPA of 3.30 or above
• Fulfill one of the following English Language Requirements
  - a minimum TOEFL total score of 100 (ibt); or
  - a minimum IELTS overall band score 7.0
• Students are required to complete a mandatory one-year internship in Hong Kong prior to the commencement of study at Columbia University.

Tuition and Fees

Students pay tuition and fees to the University in which they are enrolled. Students can apply for available scholarships.

CityU and National Taiwan University

Curriculum Design

Year 1 CityU  Year 2 NTU  Year 3 NTU  Year 4 CityU

Eligibility

• Studying the 4-year degree majoring in Civil Engineering or Materials Science and Engineering
• A minimum CGPA of 3.30 or above
• Fulfill one of the following English Language Requirements
  - a minimum TOEFL total score of 79 (ibt); or
  - a minimum IELTS overall band score 6.5

Tuition and Fees

Students pay tuition and fees to their home University. Students can apply for available scholarships.
College of Engineering

Department of Architecture and Civil Engineering (ACE)
Department of Biomedical Engineering (BME)
Department of Computer Science (CS)
Department of Electrical Engineering (EE)
Department of Materials Science and Engineering (MSE)
Department of Mechanical Engineering (MNE)
Department of Systems Engineering and Engineering Management (SEEM)
Division of Building Science and Technology (BST)
Co-operative Education Centre

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