Mission
The College of Science and Engineering is dedicated to nurturing and developing the talents of students and creating applicable knowledge in order to support social and economic advancement.

World Recognition
Quacquarelli Symonds (QS) World University Rankings

By Faculty (2015)
Engineering and Technology 60th

By Subjects (2016)
Mathematics 39th
Civil & Structural Engineering 45th
Computer Science & Information Systems 49th
Architecture/Built Environment Top 100
Electrical & Electronic Engineering Top 100
Materials Science Top 100
Mechanical, Aeronautical & Manufacturing Top 100
For admission to the 4-year bachelor’s degree, students will be enrolled to one of the departments and choose majors available in the respective department after completing the first year of study, except for departments offering one single major and the major of Nuclear and Risk Engineering.

### Bachelor’s Degree

- **Department of Architecture and Civil Engineering**
  - JUPAS Catalogue No.: JS1201
  - [Website](www.ace.cityu.edu.hk)
  - [Email](acedep@cityu.edu.hk)
  - [Phone](852)3442-7609

  **Architectural Engineering**
  - We aim to provide students with the academic background necessary for a professional architectural and building services engineer. You 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 piped services. You will also be equipped with the concept of integration between various disciplines within the architectural engineering and also the other trades of the building industry.

  **Civil Engineering (with 3 streams in Structural Engineering / Construction Management / Infrastructure and Urbanism)**
  - This major aims at equipping students with a solid foundation to work as a civil engineer. It will cover a wide spectrum of topics, for examples, construction technology, engineering management, environmental engineering, geotechnical engineering, green urbanism, hydraulic engineering, structural engineering and transportation engineering.
  - There will be three specialisms in the major: structural engineering, construction management, infrastructure and urbanism. The major will seek accreditation from professional organizations including the Hong Kong Institution of Engineering (HKIE). Graduates will be 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 also overseas.

  **Surveying**
  - We aim 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 Biology and Chemistry**
  - JUPAS Catalogue No.: JS1202
  - [Website](www.cityu.edu.hk/bch)
  - [Email](bhenquir@cityu.edu.hk)
  - [Phone](852)3442-7404

  **Chemistry**
  - To provide students with a firm foundation in chemical sciences with a focus in the following areas: analytical, environmental, inorganic, organic and physical chemistry.

- **Department of Biomedical Sciences**
  - JUPAS Catalogue No.: JS1203
  - [Website](www.cityu.edu.hk/bms)
  - [Email](bms.ug@cityu.edu.hk)
  - [Phone](852)3442-5657

  **Applied Biology**
  - This programme provides a solid basic knowledge in the life sciences, supported by more specialized studies and training in cell and molecular biology, genetics, biochemistry, and modern biomedical sciences. We aim to prepare our graduates to become professionals to work in medicine, science or education field.

  **Biomedical Sciences**
  - The Biomedical Sciences major emphasizes the integration of basic fundamental knowledge in biomedical sciences with investigative skills and state-of-the-art technologies to enable students to understand the causes, diagnoses and treatments of human disorders and disease. The programme is designed to prepare graduates for employment in biomedical research, medical device and diagnostics, and biotech and pharmaceutical industries. Our unique industry-informed curriculum provides the students with extensive exposure to medical laboratory technology and modern biotechnology, and applied research and clinical/industrial training opportunities through our strategic partnership with healthcare and medical laboratory sectors, and biotech and pharmaceutical industries.

- **Department of Computer Science**
  - JUPAS Catalogue No.: JS1204
  - [Website](www.cs.cityu.edu.hk)
  - [Email](csadm@cityu.edu.hk)
  - [Phone](852)3442-8580

  **Computer Science**
  - The Bachelor of Science in Computer Science programme 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 allow students to further specialize in different areas of expertise. In addition, the programme 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 Mathematics**
  - JUPAS Catalogue No.: JS1206
  - [Website](www.cityu.edu.hk/ma)
  - [Email](mabscm@cityu.edu.hk)
  - [Phone](852)3442-8643

  **Computing Mathematics**
  - The Department of Mathematics offers the Bachelor of Science in Computing Mathematics degree, which aims at equipping students and producing graduates with a strong background in data analysis, mathematical modelling, scientific computing and technical computer software. Graduates will make contributions to finance and industry in the growing technology fields in Hong Kong such as biotechnology, data analysis, environmental science, information technology and intelligent business. The title of “Computing Mathematics” has been chosen as the major will focus on applied areas of mathematics linked to computing and computation.

* This major is currently under review and is subject to revision.
Bachelor's Degree

The major aims at equipping students with a solid foundation to work in the technology fields in Hong Kong such as biotechnology, data analysis, and the finance and industry in the growing estate and infrastructure development. Graduates will make contributions to these areas.

There will be three specialisms in the major: structural engineering, civil engineering, and transportation engineering. Students will also be equipped with the concept of integration between various disciplines within the architectural engineering and also pipe services. You will also be equipped with the knowledge and skills to thrive in the fast-paced and competitive fields.

Electronic and Communication Engineering

The aim of this major is to provide students with a solid education in electronics and communications. Students will be exposed to the latest developments in communications (data, wireless and optical), signal processing, circuits and devices, and systems and control. Our education will transform students into well-trained professional engineers with the skills and vision to enable students to progress further in their career path in this rapidly changing knowledge-based economy. The major will also equip students to pursue postgraduate studies.

Information Engineering

The aim of this major is to provide the solid foundation necessary for students to embark on a successful career in IT-related fields, such as Telecommunications and Network Engineering, Network and Computer System Administration, Software Development, and Multimedia Computing. Three popular and professional technical training programmes are integrated into the major structure. They are:

• Cisco CCNA Network Associate Certification
• Fundamental Linux Training
• Google Android and Apple iOS Mobile App Design

The strong knowledge base gained in this major prepares graduates 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.

Computer and Data Engineering

The aim of this major is to provide students with a strong foundation in the core computer and data technologies. Students will be equipped with the theoretical and practical aspects of both hardware and software. The major provides opportunities for students to develop independent learning, organisational and communication skills. Upon completion of the major, graduates will be able to analyse data, build data mining algorithms, and design and implement computer systems that enable them to process and analyse big data. They will also be sufficiently prepared to pursue postgraduate studies and engage in life-long learning.

Department of Electronic Engineering

JUPAS Catalogue No.: JS1205

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

JUPAS Catalogue No.: JS1209

Department of Mechanical and Biomedical Engineering

Bioengineering

To pursue excellence in education, research, and innovation through the fusion of engineering with life sciences for the advancement of human health. To enable students to be well prepared for professional employment in areas such as the medical device industry, medical diagnostics and treatment technique, public health consulting, drug discovery, food safety and bio-security testing, and advancement of various biotechnologies.

Mechanical Engineering

To provide a systematic curriculum by combining education, research and development of innovative technology and enable students to tackle engineering problems in mechanical related areas efficiently and independently. To equip students with critical thinking, independent research, qualitative and quantitative analysis capacities. To prepare students for professional employment in areas such as engineering design of materials, dynamical and control analysis, automation engineering, and micro and nano technologies.

Department of Physics and Materials Science

Applied Physics

Applied physics adopts and utilizes physics principles for a multitude of scientific and technological applications. In fact, much of modern technology and its advances owe its existence to applied physics. Therefore, its scope of study overlaps with many other scientific and engineering disciplines (e.g., materials science, environmental science, biomedical science and engineering, electronics, mechanical and manufacturing engineering).

Graduates with a degree in applied physics possess a unique qualification: not only do they have a fundamental understanding of physics principles, but are also trained to apply these principles to various fields. Applied physics graduates have strong training in problem-solving, research and development. Because of this background, graduates generally need less time to integrate themselves into future jobs, and adapt well to technological changes.

Materials Engineering

The role of materials in our society is much more influential than most of us have realized. Our lives would be endangered by storms in the absence of dependable concrete and steel structures. Our visual defects cannot be easily corrected without glass and high refractive index scratch resistance polymers. The launching of satellites and space shuttles would not be possible without heat-resistant materials and semiconductors. Our comfortable lives are intimately associated with the discovery, selection and processing of natural and synthetic materials. Materials Engineering deals with the advancement in our understanding and manipulation of materials, which is always the forerunner to the progression of technology.

Department of Systems Engineering and Engineering Management

JUPAS Catalogue No.: JS1209

(852)3442-9321
seemgo@cityu.edu.hk
www.cityu.edu.hk/seem

JUPAS Catalogue No.: JS1208

(852)3442-7831
apoffice@cityu.edu.hk
www.ap.cityu.edu.hk

JUPAS Catalogue No.: JS1207

(852)3442-8420
mbego@cityu.edu.hk
www.cityu.edu.hk/mbe

JUPAS Catalogue No.: JS1692

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This programme is accredited by both the Hong Kong Institution of Engineers (HKIE) and the Hong Kong Institute of Construction Engineers (HKIS) and Royal Institution of Chartered Surveyors. Upon completion of this programme, students would be able to perform practical surveying works in building projects and provide a working knowledge of survey on site and in the office. In addition, students will be familiar with the computer software and equipment used in surveying work. They will also be able to perform practical works in building services engineering under the supervision of a professional building services engineer.

This programme is accredited by the Hong Kong Institute of Surveyors (HKIS) and Royal Institution of Chartered Surveyors. Upon completion of this programme, students would be able to perform practical surveying works in building projects and provide a working knowledge of survey on site and in the office. In addition, students will be familiar with the computer software and equipment used in surveying work. They will also be able to perform practical works in building services engineering under the supervision of a professional building services engineer.

Applied Physics

The major will also equip students to pursue postgraduate studies.

Information Engineering

The aim of this major is to provide the solid foundation necessary for students to embark on a successful career in IT-related fields, such as Telecommunications and Network Engineering, Network and Computer System Administration, Software Development, and Multimedia Computing. Three popular and professional technical training programmes are integrated into the major structure. They are:

• Cisco CCNA Network Associate Certification
• Fundamental Linux Training
• Google Android and Apple iOS Mobile App Design

The strong knowledge base gained in this major prepares graduates 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.

Electronic and Communication Engineering

The aim of this major is to provide students with a solid education in electronics and communications. Students will be exposed to the latest developments in communications (data, wireless and optical), signal processing, circuits and devices, and systems and control. Our education will transform students into well-trained professional engineers with the skills and vision to enable students to progress further in their career path in this rapidly changing knowledge-based economy. The major will also equip students to pursue postgraduate studies.

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Systems Engineering and Management (with 2 optional streams in Total Quality Engineering / Data Analytics)

To nurture the analytic skills of the students in understanding, analyzing, managing, and improving modern enterprises and systems, grounded in engineering principles and methods. An enterprise under consideration can be an engineering, business, governmental, or service-oriented organization. The targets of management and improvement are the operations and processes within an enterprise, or the products and services offered by an enterprise. A BENG SEM student is trained to become an analytic and versatile graduate, capable of effecting positive impacts in these target areas in his or her organization.
**Department of Architecture and Civil Engineering**

**Architectural Studies**

(For holders of associate degree or higher diploma in Architectural Studies or an equivalent qualification)

We aim to provide a basis for continuing professional development and encourage professional specialisation and higher academic study, particularly for those with an Associate Degree or Higher Diploma in Architectural Studies looking for articulation to a corresponding full-time Bachelor degree programme.

This major is designed to prepare graduates for a multidisciplinary professional architectural practice by equipping them with a deep understanding of diverse architectural knowledge and a command of technology and integration that will enable them to serve the building industry as architects or other professionals. Graduates will become the driving force behind innovative and creative architectural designs that reflect a balance and integration of design and technology.

**Associate Degree**

**Department of Architecture and Civil Engineering**

JUPAS Catalogue No.: JS1093

**Architectural Studies**

The programme seeks to prepare students for a role that is complementary to that of the architect in the preparation of design and production information for building projects, and 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 studies with credit transfers in overseas universities.

**Department of Biology and Chemistry**

(For Advanced Standing II admission only)

**Applied Biology**

To provide students with a firm foundation in biological sciences and specialisation in one of the following areas: biotechnology and molecular biology, environmental monitoring and pollution control, or industrial and food microbiology.

**Environmental Science and Management**

To train environmental managers who possess a solid scientific background in areas of environmental management and analysis, conservation and resource management, pollution control and impact assessment as well as a sound knowledge of social, economic and legal issues.
A Brand New College Experience

The Joint Bachelor’s Degree Program between City University of Hong Kong and Columbia University offers students an international undergraduate educational experience—a program spanning two continents, in cosmopolitan cities that allow students to engage directly with the world around them. The program draws upon elements both traditional and innovative, combining the academic rigor of two world-renowned universities with an attention to the roles that social and cultural traditions play in a student’s intellectual formation.

4-year degree students in eligible majors with outstanding academic performance may apply for the Joint Bachelor’s Degree program.

To learn more about the Joint Bachelor’s Degree Program, visit gs.columbia.edu/cityu-hk
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Computer Science & Information Systems 49th
Architecture/Built Environment Top 100
Electrical & Electronic Engineering Top 100
Materials Science Top 100
Mechanical, Aeronautical & Manufacturing Top 100