



Faculty of Engineering

Available Major and Minor Options (Quick Glance)

(For Non-Engineering Faculty Students)

Majors	Minors
<ul style="list-style-type: none">• Biomedical Engineering• Computer Science• Computing and Data Analytics*• Energy Engineering• Environmental Engineering• Materials Engineering	<ul style="list-style-type: none">• Computer Science• Electrical and Electronic Engineering• Environmental Engineering• Geotechnical Engineering• Industrial Engineering and Logistics Management• Mechanical Engineering

** except major in Computer Science, major in Decision Analytics, major in Statistics, major in Risk Management, minor in Computer Science, minor in Decision Analytics, minor in Statistics and minor in Risk Management.*

For details, please refer to individual factsheets.



Faculty of Engineering Biomedical Engineering

Offered As:	✓ Major
*Open to students of other Faculties:	✓
What is it about?	Medical Engineering (also known as biomedical engineering) is a multi-disciplinary subject integrating the knowledge of engineering, biology and medicine. Inheriting the traditional engineering practice/training as well as acquiring the knowledge in life science, medical engineers learn how to understand, define and solve challenges in biology and medicine - advancing healthcare, including diagnosis, monitoring, treatment and therapy.
Offering Faculty/ Department/ School/Institute:	BEng in Engineering Science programme
Pre-requisite requirements and/or other conditions for declaring the major/minor	<ul style="list-style-type: none">• Level 3 or above in HKDSE Mathematics or equivalent• Level 3 or above in HKDSE Physics or Combined Science with Physics component or equivalent
Career opportunities:	Medical engineers are trained to fuel technological invention in medical professions. Graduates can work as scientists and engineers in hospitals and research institutions, or as sales engineers specialising in medical, healthcare or sports equipment. Graduates are also bona fide electronic and mechanical engineers, and can compete in the job market as such.
Further information:	http://engg.hku.hk/EngSci/
Contact:	Dr. W.N. Lee Tel: (852) 2859 2703 Email: wnlee@eee.hku.hk

* Note: Students pursuing curricula with major / minor programme(s) must complete at least one major programme from their home Faculties upon graduation.

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Faculty of Engineering Computer Science

Offered As:	✓ Major	✓ Minor
*Open to students of other Faculties:	✓ (except major in Decision Analytics and major in Computing and Data Analytics)	
What is it about?	The major/minor in Computer Science provides students with a substantial foundation in key computer science subject areas and modern software technologies. On completion, students will be well-equipped with both basic and advance knowledge in computer science, and are better prepared to launch their career in IT industry and/or to pursue postgraduate studies in Computer Science.	
Offering Faculty/ Department/ School/Institute:	Department of Computer Science	

Pre-requisite requirements and/or other conditions for declaring the major/minor	<ul style="list-style-type: none"> • Level 3 or above in HKDSE Mathematics or equivalent
Career opportunities:	Computer Science graduates work as IT professionals in different sectors of the society, say banking & finance, the government, education, IT & telecommunication, etc. The problem solving skills and analytical abilities that they have developed during their study proved to be very valuable in many areas of endeavour. For further information, please check with Department of Computer Science and CEDARS (Careers & Placement).
Further information:	http://www.cs.hku.hk/programme/
Contact:	Dr. H.F. Ting Tel: 2859 8944 Email: hfting@cs.hku.hk

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Faculty of Engineering Computing and Data Analytics

Offered As:	✓ Major
*Open to students of other Faculties:	✓ (except major in Computer Science, major in Decision Analytics, major in Statistics, major in Risk Management, minor in Computer Science, minor in Decision Analytics, minor in Statistics and minor in Risk Management)
What is it about?	Due to the increase in demand for big data analysis and data mining as well as knowledge discovery in various industries, this stream is tailor-made to equip students with both basic and advance knowledge in computer science, statistics and mathematics to pursue career as well as postgraduate study in this direction.
Offering Faculty/ Department/ School/Institute:	BEng in Engineering Science programme

Pre-requisite requirements and/or other conditions for declaring the major/minor	<ul style="list-style-type: none"> • Level 3 or above in HKDSE Mathematics or equivalent • Level 3 or above in HKDSE Physics or Combined Science with Physics component or equivalent • Impermissible combinations: <ul style="list-style-type: none"> Major in Computer Science, Decision Analytics, Risk Management, Statistics Minor in Computer Science, Decision Analytics, Risk Management, Statistics
Career opportunities:	IT related jobs especially those involve “big” and/or “complicated” data analysis (e.g. stock market data analysis; financial engineering; and data mining on large volume of data). For further information, please check with the Department of Computer Science and CEDARS (Careers & Placement).
Further information:	http://www.cs.hku.hk/programme/
Contact:	Dr. H.F. Ting Tel: 2859 8944 Email: hfting@cs.hku.hk

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Faculty of Engineering

Electrical and Electronic Engineering

Offered As:		✓ Minor
*Open to students of other Faculties:	✓	
What is it about?	Electrical and electronic systems permeate through all aspects of our daily life: manufacturing, transportation, communication, housing, education, etc. It is hard to imagine a life without electricity, the MTR, elevator, smart phone, computers, Internet, etc. Pursuing a Minor in Electrical and Electronic Engineering will enable you to have fundamental understanding of how such technologies are implemented.	
Offering Faculty/ Department/ School/Institute:	Department of Electrical and Electronic Engineering	
Pre-requisite requirements and/or other conditions for declaring the major/minor:	<ul style="list-style-type: none">• Level 3 or above in HKDSE Mathematics or equivalent• Level 3 or above in HKDSE Physics or Combined Science with Physics component or equivalent	
Careers opportunities	With a better understanding of electrical and electronic engineering, the career options can be easily broadened to include semi-technical positions in government, transportation, aviation, manufacturing, power, and finance services. The minor also serves as a good foundation to those aspiring to be technopreneurs.	
Further information:	http://www.eee.hku.hk/study/eee_minor.html	
Contact:	Dr. S.C. Tan Tel: 2859 2707 Email: sctan@eee.hku.hk	

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Faculty of Engineering Energy Engineering

Offered As:	✓ Major
*Open to students of other Faculties:	✓
What is it about?	The limited resources of the earth and the implications of a series of energy crisis propel mankind to seriously think about the proper and efficient utilization of world energy. Specialists in the technology on sustainable and renewable energy are highly sought all over the world and this programme is best in nurturing experts in the exploration and development of renewable energy. This major is jointly offered by the Departments of Electrical & Electronic Engineering and Mechanical Engineering, which enables students to acquire the knowledge in various categories of renewable energy, energy technology, power system, electric vehicle, building services and electrical system for mass transportation.
Offering Faculty/ Department/ School/Institute:	BEng in Engineering Science programme

Pre-requisite requirements and/or other conditions for declaring the major/minor:	<ul style="list-style-type: none"> • Level 3 or above in HKDSE Mathematics or equivalent • Level 3 or above in HKDSE Physics or Combined Science with Physics component or equivalent
Career opportunities:	Graduates with this major may work as Engineers in Power and Electricity Company, Mass Transportation Corporation, or in the HKSAR government. For further information, please check with the Faculty of Engineering and CEDARS (Careers & Placement).
Further information:	http://engg.hku.hk/EngSci/
Contact:	Dr. J. Zhong Tel: 2857 8487 Email: jzhong@eee.hku.hk

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Faculty of Engineering Environmental Engineering

Offered As:	✓ Major
*Open to students of other Faculties:	✓
What is it about?	With the increasing importance of environmental protection and conservation, engineers with high consciousness in environment are in high demand to provide solutions for engineering projects that will have positive impact on the world environment. This major is jointly offered by the Departments of Civil Engineering and Mechanical Engineering. Students will have the opportunity to study foundation engineering subjects and advanced courses in hydrology, waste management, renewable energy and pollution control.
Offering Faculty/ Department/ School/Institute:	BEng in Engineering Science programme

Pre-requisite requirements and/or other conditions for declaring the major/minor:	<ul style="list-style-type: none">• Level 3 or above in HKDSE Mathematics or equivalent• Level 3 or above in HKDSE Physics or Combined Science with Physics component or equivalent
Career opportunities:	Graduates with this major may work as Engineering Consultants, Scientific Officers, or in the HKSAR government. For further information, please check with the Faculty of Engineering and CEDARS (Careers & Placement).
Further information:	http://engg.hku.hk/EngSci/
Contact:	Dr. C.Y. Tang Tel: (852) 2859 1976 Email: tangc@hku.hk

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Faculty of Engineering Environmental Engineering

Offered As:	✓ Minor	
*Open to students of other Faculties:	✓	
What is it about?	Hong Kong's environment is deteriorating and the HKSAR Government commissions many engineering projects to improve the environment. Mandatory environmental impact assessments are required for all major public and private development projects. All of the effort for sustainable urban development has created a strong demand for graduates with a background in environmental engineering.	
Offering Faculty/ Department/ School/Institute:	Department of Civil Engineering	
Pre-requisite requirements and/or other conditions for declaring the major/minor	<ul style="list-style-type: none">• Level 3 or above in HKDSE Mathematics or equivalent• Level 3 or above in HKDSE Physics or Combined Science with Physics component or equivalent	
Careers opportunities	There is a strong demand for graduates with background in environmental engineering knowledge to tackle environmental problems related to our infrastructure, such as water supply, wastewater drainage, environmental impact assessment and pollution control.	
Further information:	http://engg.hku.hk/home/minor/enve.htm	
Contact:	Dr. K.L. Su Tel: 2859 2648 Email: klsu@hku.hk	

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Faculty of Engineering Geotechnical Engineering

Offered As:	✓ Minor	
*Open to students of other Faculties:	✓	
What is it about?	Geotechnical engineering includes studies in the major area of soil and rock mechanics, foundation and earth retaining systems, ground treatment and slope engineering. Landslide is a common natural hazard in Hong Kong in which engineers and researchers spend much effort to mitigate the loss. Furthermore, development of the city urges into constructing tunnels and caverns, and reclaiming lands for a sustainable infrastructure development. Therefore, there is a strong demand for graduates with background in geotechnical engineering knowledge to work in these related projects.	
Offering Faculty/ Department/ School/Institute:	Department of Civil Engineering	

Pre-requisite requirements and/or other conditions for declaring the major/minor	<ul style="list-style-type: none">• Level 3 or above in HKDSE Mathematics or equivalent• Level 3 or above in HKDSE Physics or Combined Science with Physics component or equivalent
Career opportunities	There is a strong demand for graduates with background in geotechnical engineering knowledge to work in areas such as tunnels and caverns construction and reclamation of lands.
Further information:	http://engg.hku.hk/home/minor/geotech.htm
Contact:	Dr. K.L. Su Tel: 2859 2648 Email: klsu@hku.hk

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Faculty of Engineering

Industrial Engineering and Logistics Management

Offered As:		✓ Minor
*Open to students of other Faculties:	✓	
What is it about?	The programme offers students fundamental knowledge in industrial engineering and logistics management. The main knowledge areas covered in the programme include market analysis skills, sourcing decisions skills, change management, planning and organization skills, cost analysis, planning and design of logistics systems and supply chains, product and design knowledge, production planning and inventory control, etc.	
Offering Faculty/ Department/ School/Institute:	Department of Industrial and Manufacturing Systems Engineering	

Pre-requisite requirements and/or other conditions for declaring the major/minor:	<ul style="list-style-type: none"> Level 4 or above in HKDSE Mathematics or equivalent 	
Career opportunities	Graduates with industrial engineering and logistics management background will be excellent assets to e-commerce organisations, manufacturing corporations, consultancy firms, communication companies, public utility organisations, service providers such as banks and mass entertainment corporations, and materials handling centers such as airport and railway corporations and container terminals.	
Further information:	For further information, please check with Department of Industrial and Manufacturing Systems Engineering.	
Contact:	Dr. J.W.C. Ng Tel: 2859 7058 Email: ngwc@hku.hk	

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Faculty of Engineering Materials Engineering

Offered As:	✓ Major	
*Open to students of other Faculties:	✓	
What is it about?	Materials Engineering is an emerging discipline focusing on the innovation and application of new materials in the high technology sector, like nanotechnology, in the medical, optical or aeronautical field, for the betterment of mankind. This major is jointly offered by the Departments of Electrical & Electronic Engineering and Mechanical Engineering. Students will get the chance to acquire top-notch knowledge in mechanics, nanotechnology, biomaterials, optical network technology, aeronautical engineering and medical devices.	
Offering Faculty/ Department/ School/Institute:	BEng in Engineering Science programme	

Pre-requisite requirements and/or other conditions for declaring the major/minor:	<ul style="list-style-type: none">• Level 3 or above in HKDSE Mathematics or equivalent• Level 3 or above in HKDSE Physics or Combined Science with Physics component or equivalent
Career opportunities:	Graduates with this major may work as Materials Engineers or Research Engineers. For further information, please check with the Faculty of Engineering and CEDARS (Careers & Placement).
Further information:	http://engg.hku.hk/EngSci/
Contact:	Dr. M.X. Huang Tel: 3917 7906 Email: mxhuang@hku.hk

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Faculty of Engineering Mechanical Engineering

Offered As:	✓ Minor
*Open to students of other Faculties:	✓
What is it about?	Mechanical engineering is a discipline at the heart of engineering. Indeed, nothing can move and function well in the modern world without the participation of mechanical engineers. In transportation, motor cars, mass transit railway systems, ships and aeroplanes are designed and maintained by mechanical engineers. Factories producing mechanical and electronic products cannot run smoothly without mechanical engineers. Power stations and all types of buildings would come to a halt without mechanical engineers.
Offering Faculty/ Department/ School/Institute:	Department of Mechanical Engineering

Pre-requisite requirements and/or other conditions for declaring the major/minor:	<ul style="list-style-type: none">• Level 3 or above in HKDSE Mathematics or equivalent• Level 3 or above in HKDSE Physics or Combined Science with Physics component or equivalent
Career opportunities	Mechanical engineers are trained to cope with a variety of challenges and have a very broad career spectrum.
Further information:	http://me.hku.hk
Contact:	Prof. K.W. Chow Tel: 3917 2641 Email: kwchow@hku.hk

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