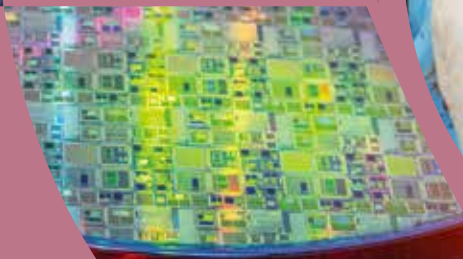


School of Engineering

Master of Science Program

Asia's Foremost Engineering University

- **Electronic Engineering (ELEG)**
- **Integrated Circuits (IC)**
- **Telecommunications (Telecom)**



A Global Engineering Powerhouse



Master of Science Program in

- **Electronic Engineering (ELEG)**
- **Integrated Circuits (IC)**
- **Telecommunications (Telecom)**

Thinking of preparing yourself for senior positions in the engineering industry? Looking for reliable support to empower you to pursue your academic goals?

Welcome to the School of Engineering of The Hong Kong University of Science and Technology (HKUST), a global engineering powerhouse and one of Asia's top academic faculties.

International Success

HKUST is a relatively new institution at only 32 years old, but it has consistently been ranked amongst the world's top research universities over the past decade

2nd

*Times Higher Education Young University Rankings 2023
– World's Top 600+ Young Universities*

26th

Times Higher Education World University Rankings 2023 – Engineering

30th

Global Employability University Ranking 2022



Why study at HKUST

- **Located in Hong Kong** – A vibrant cultural and business hub in Asia and a gateway to mainland China.
- **English language instruction** – Enable a broad range of students to access the world-class teaching and facilities.
- **A broad range of specializations available** – Ensure students' academic potential and interests are fulfilled.
- **Affordable tuition** – Between one-third and one-half of a comparable MSc in US and the UK.
- **Guaranteed 24-month visa to work in Hong Kong** – Enable non-local students to explore the myriad of opportunities available to them.
- **International faculty** – Majority originate from the world-class universities.

MSc (ELEG)

Program Objective

This program brings students up-to-date in the use of state-of-the-art technologies that are changing the way we work and interact in an increasingly interconnected world. It offers courses in a broad range of subjects in electronic engineering, and is deliberately broad in scope to provide a balanced view of the technology and maximum flexibility to the students.

A Selection of Courses*:

- Advanced Architectures and Designs for Communication Networks
- Business for Electronic Engineers
- Diagnostic Medical Imaging
- Digital Communication Networks and Systems
- Flat Panel Displays
- Independent Study
- Integrated Design of RF Wireless Transceiver Systems and Building Blocks
- Modern Control Systems Design
- Photonics Technology and Applications
- Signal Analysis and Pattern Recognition
- Stochastic Learning, Estimation, and Control

MSc (IC)

Program Objective

Specifically tailored to train IC engineers, this program is designed for professionals and students with a bachelor's degree in engineering or science who are interested in acquiring in-depth knowledge in microelectronic engineering, or upgrade their knowledge in IC engineering.

A Selection of Courses*:

- Advanced Analog IC Analysis and Design
- Analog IC Analysis and Design
- CMOS RF Integrated System and Circuit Design
- CMOS VLSI Design
- Digital VLSI System Design and Design Automation
- Embedded Systems
- Guided Chip Design Project
- Power Management Circuits and Systems
- Semiconductor Devices for Integrated Circuit Designs



MSc (Telecom)

Program Objective

The primary objective of this program is to equip participating students with a comprehensive and up-to-date knowledge based on the latest topics in wireless systems, optical networking, broadband multimedia communications, and convergence protocols.

A Selection of Courses*:

- Current and Emerging Technologies in Telecommunications
- Digital Communications
- Introduction to Telecommunication Networks
- IP Networks
- Mobile Edge Computing and Edge AI
- Multimedia Signal Processing
- Wireless Communication Networks
- Wireless Communication Systems

Please refer to program websites for the most updated course list:

<https://seng.hkust.edu.hk/msc/eleg>

<https://seng.hkust.edu.hk/msc/ic>

<https://seng.hkust.edu.hk/msc/telec>

*Note: Subject to approval, students from each program may take a maximum of 9 credits from outside the corresponding list of courses.

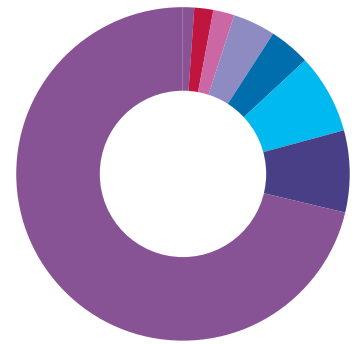
Program Duration and Credit Requirement

Program	Total Credits	Mode of Study	Fall	Winter	Spring
ELEG	24 credits	Full-time (1 year)	12 credits	-	12 credits
		Part-time (2 years)	6 credits	-	6 credits
IC	25 credits (including Guided Chip Design Project)	Full-time (1 year)	12 credits	Guided Chip Design Project	9 credits + Project (cont.)
		Part-time (2 years)	6 credits	-	6 credits
			6 credits	Guided Chip Design Project	3 credits + Project (cont.)
Telecom	24 credits + MSc Project (6 credits)	Full-time (1 year)	12 credits + MSc Project	-	12 credits + MSc Project (cont.)
		Part-time (2 years)	6 credits + MSc Project (2 nd year)	-	6 credits + MSc Project (cont.)

Subject to availability, classes are normally held on weekday evenings or Saturday afternoons. Each course typically meets once a week for approximately three hours.

Postgraduate Career Opportunities

- Engineering 72%
- Scientific / Research Work 10%
- System Analysis & Computer Programming 8%
- Others 4%
- Administration / Management 3%
- Marketing / Sales 2%
- Teaching / Lecturing 1%



Some of the companies which our graduates are working in / have received job offer from:

- | | | | |
|--|---|--|--|
| <ul style="list-style-type: none"> • Alibaba • AppoTech Limited • ASTRI • Bank of China • China Telecom • China Mobile Hong Kong • Cisco Systems • CITIC Telecom International Holdings Limited • City University of Hong Kong • Credo Technology (HK) Ltd | <ul style="list-style-type: none"> • DJI Innovations • H3C Technologies Co., Ltd • Hikvision • HNA Airport Group • Hong Kong Center for Construction Robotics • HP • HSBC • Huawei • IBM • Intel • Kerry Logistics • Kinetic Technologies | <ul style="list-style-type: none"> • Lenovo • Merrill Lynch • Micron Semiconductor Asia Operations Pte. Ltd. • Microchip Technology Inc. • Nokia • OPPO • Panasonic Avionics Corporation • PCCW Limited • RDA Technologies Limited • Sana Semiconductors Limited | <ul style="list-style-type: none"> • Schneider Electric • SG Micro Limited • Sinopec HK • SmarTone Telecommunications Holdings Limited • Societe Generale Group • TCL Corporation • Telstra • The Hong Kong Polytechnic University • Thales • TP-LINK • Wharf T&T |
|--|---|--|--|

International Student Body

The MSc students are from all corners of the world. Their culture and academic background bring a unique quality to our engineering programs and allow them to learn from peers with remarkably diverse backgrounds.

Countries of Origin:





Courses in the MSc in Telecommunication program in HKUST were well designed and provided us a full picture on how information is exchanged between communication parties. The passionate professors here are confident in their specialist knowledge and able to response students' questions clearly... Through different course projects, we could also gain some hands-on experiences by researching, programming and presenting. This MSc program has equipped me with the important knowledge of underlying communication technologies to deal with IoT related engineering problems. It is absolutely worth to study here no matter you are developing your interests in telecom industry or even other fields in IT industry. ”

LI Yik Chun

(Hong Kong, 2019)



MSc (Telecom)



I believe HKUST is a marvelous choice, if you are looking for world-class technical education with a strong emphasis on innovation, teamwork and research. The workload is considerable and the reward too likewise if you are ready to commit yourself to your goals.

Students have ample freedom to work on projects alongside classes, or to take part in student associations. Professors are accessible and we can rely on their help for projects. The campus is wonderful and well-situated, with unmatched facilities and equipment.

You may also join student societies, learn Cantonese, engage in extra-curricular activities and much more. You will make many new friends, and add value to your studying experience at HKUST. ”

SRIVASTAVA Priya Mohan

(India, 2019)



Studying telecommunications at HKUST is the best choice for me after working for a few years. The courses provided me with a comprehensive understanding of wireless communication. The professors in the program are world-class and their expertise in various areas of telecommunications is truly impressive. I found that the classes were always engaging and never dull, especially with Prof. Khaled B. Letaief. We also have the chance to complete an MSc project. It allowed us to apply the theories we learned in the classroom to practical systems and to gain a deeper understanding of the research and implementation challenges. Overall, the experience is unforgettable and has truly shaped my career and personal growth. ”

ZHANG Yixing

(Mainland China, 2023)



MSc (IC)*



All I have to say is studying IC design Engineering in HKUST was a good and challenging experience. The program covers all the fundamentals of IC design with experienced professors who are there to inspire the learners to learn. After studying the IC design program, I come to know how the semiconductor industry works and how chips are designed and fabricated.

My message to future students is that if they are willing to design chips, HKUST is a very good place. ”

ALI Hassan

(Pakistan, 2020)



ICDE program not only provides training on skills especially in IC directions, but also deeply discusses the topology of designing all types of ICs (eg. RF, PMIC, SOC, Signal chain) and the underlying principles of semiconductor device physics. Moreover, professors are very famous figures in the IC industry, and I am deeply impressed by their seriousness and tirelessness in teaching, which is not only reflected in their knowledge, but also in the current trend and future career planning of the IC industry. ”

HUANG Zhihong

(Mainland China, 2022)



Learning IC design in HKUST is a funny and interesting process. You can study the most advanced IC knowledge here and try to design lots of circuit and chip by yourself. It's a place of knowledge and opportunity and I'm glad I spent the year here. ”

SONG Jiatong

(Mainland China, 2020)



* Program renamed from MSc in IC Design Engineering.

MSc (ELEG)

“HKUST is just like heaven which has lots of extremely outstanding professors and students from all around the world, I am so thankful to have the chance to further my study in this warm family. On top of that, the curriculum provided by MSc(ELEG) program covers a wide range of knowledge and skills, this flexible curriculum allows us to learn what we love and prepare for our future careers...”

HONG Xiaosen

(Mainland China, 2021)

“As a MSc(ELEG) Student at HKUST, you are guaranteed to get an unforgettable experience. The program offers a wide range of courses, and as a student, you have the flexibility to choose the ones that interest you the most. You can also choose to do an independent study. This means that you can come up with a project proposal and work independently on it, under the guidance of a professor. This was a great opportunity for me to explore my interests and learn at my own pace.

The professors at HKUST were not only knowledgeable but also approachable. They shared a lot of knowledge, not only technical but also personal, and were always willing to share their expertise for my career planning. Some of them acted as mentors for the students, which was a great help in guiding us towards the right career path.

The university will also support students in various ways to help them with their career. From Cantonese courses to career talks, and job fairs, the university has it all. There is no doubt that the knowledge that I have learned during the program will be beneficial for my future career.”

BERL Markus

(Austria, 2023)



Application

For admission details and procedures, please check: <https://fytgs.hkust.edu.hk>
Early application is recommended for non-local applicants for visa processing.

Program Fee / Scholarship / Financial Support

Please refer to individual program website <https://seng.hkust.edu.hk/programs> for the most updated program fee, scholarship and financial support.

Various scholarships are available, including:

- Arthur and Louise May Scholarship
- Asian Future Leaders Scholarship Program
- Entrance Scholarship
- Excellent Student Scholarship
- Hong Kong Talent Development Scholarship

Financial support is available to citizens from Brazil, Indonesia, the Republic of Kazakhstan, Norway, Russia, Sweden, and many more.



“The curriculum of MSc (ELEG) program is attractive; it provides a wide range of choices and freedom on course selection. Students can get access to courses ranging from RF circuit design in hardware area to machine learning in software area which allow us to choose courses that suit us the best.

Moreover, esteemed professors are highly accessible and willing to give valuable advice. Also, the first-class lab facilities open to MSc students for doing their independent study.

Last but not least, I met like-minded friends through working on projects and we had a great time exploring Hong Kong together. MSc (ELEG) program provides me with infinite possibilities and the experience at HKUST has great influence on my life.”

AN Yiqi

(Mainland China, 2022)

Contact

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📠 (852) 2719 3027

🌐 <https://seng.hkust.edu.hk/programs>

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