The Hong Kong University of Science and Technology, with the strategic location in China, the idyllic environment for study, the world-class faculty, the stellar international university ranking and the vibrant student community, we welcome you to join us, the Top Engineering School in Asia and in the World.

Our Advantages

- Top Engineering School in Asia and in the World
  
  **QS World University Rankings - Engineering and Technology**
  No.14 (2015)
  
  **Times Higher Education World University Rankings - Engineering and Technology**
  No.16 (2015)
  
  **Global Employability University Ranking**
  No. 14 (2015)

- A hub for Asia and a gateway to China
- International faculty and students
- English is the medium of instruction
- 1 to 2 years program duration
- Tuition fee is 1/3 to 1/2 of what is charged in US and UK
- 12-month VISA to work in HK upon graduation
### Student Body

More than 700 students are admitted in our MSc programs every year, and around 10% of them are international students from around the world.

**Examples of countries:**
- Algeria
- Australia
- Bangladesh
- Bulgaria
- Canada
- China
- Colombia
- Cyprus
- Ecuador
- Egypt
- France
- Germany
- Ghana
- India
- Indonesia
- Iran
- Italy
- Kazakhstan
- Malaysia
- Mauritius
- Mexico
- Nepal
- Netherlands
- Nigeria
- Norway
- Pakistan
- Peru
- Philippines
- Portugal
- Russia
- Singapore
- South Korea
- Spain
- Sri Lanka
- Sweden
- Thailand
- Tunisia
- Turkey
- United Kingdom
- United States

### Scholarship

Various scholarships are available including Entrance Scholarship and Excellent Student Scholarship offered by School of Engineering, Scholarships offered by the Industry, and Scholarships for citizens from Brazil, Indonesia, the Republic of Kazakhstan, Pakistan/AJK, Russia, etc. Details please refer to individual program web page at http://www.seng.ust.hk/programs.

### World Class International Faculty

- 100% hold doctorate degrees
- Majority from the following universities:
  - Caltech
  - Cambridge
  - Carnegie Mellon
  - Chicago
  - Columbia
  - Cornell
  - Harvard
  - Illinois
  - Imperial
  - London
  - Michigan
  - MIT
  - Northwestern
  - Oxford
  - Princeton
  - Purdue
  - Stanford
  - Toronto
  - UBC
  - UC Berkeley
  - UCLA
  - Washington
  - Wisconsin
  - Yale

### Various Master of Science (MSc) Programs are on offer:

<table>
<thead>
<tr>
<th>Program</th>
<th>Rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chemical Engineering</strong></td>
<td>No.30 (2016)</td>
</tr>
<tr>
<td><strong>Civil &amp; Structural Engineering</strong></td>
<td>No.23 (2016)</td>
</tr>
<tr>
<td><strong>Computer Science &amp; Information Systems</strong></td>
<td>No.14 (2016)</td>
</tr>
<tr>
<td><strong>Electrical &amp; Electronic Engineering</strong></td>
<td>No.25 (2016)</td>
</tr>
<tr>
<td><strong>Mechanical, Aeronautical &amp; Manufacturing Engineering</strong></td>
<td>No.39 (2016)</td>
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</tbody>
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* In collaboration with Ecole Nationale de l’Aviation Civile (ENAC), France

^ This is an exempted program under the Non-local Higher and Professional Education (Regulation) Ordinance in Hong Kong. It is a matter of discretion for individual employers to recognise any qualifications to which this program may lead.
Department of Chemical & Biomolecular Engineering

Master of Science (MSc) in Chemical and Biomolecular Engineering

CBME 5110 Theory and Practice in Heterogeneous Catalysis
CBME 5200 Applied Mathematical Methods in Chemical Engineering
CBME 5210 Advanced Separation Processes
CBME 5300 Advanced Chemical Engineering Thermodynamics
CBME 5320 Water Quality and Assessment
CBME 5400 Advanced Transport Phenomena
CBME 5510 Processing of Polymers and Polymer Composites
CBME 5520 Characterization of Polymers
CBME 5550 Polymer Physics and Advanced Applications
CBME 5610 Advanced Biochemical Engineering
CBME 5750 Process Safety Management and Risk Analysis
CBME 5760 Advanced Physico-Chemical Treatment Processes
CBME 5780 Environmental Management, Auditing, Licensing and Impacts
CBME 5810 Energy Integration and Optimization
CBME 5820 Energy, Environment and Sustainable Development
CBME 5830 Electrochemical Energy Technologies
CBME 5840 Nanomaterials for Chemical Engineering Applications
CBME 5860 Chemical Product Engineering
CBME 6000 Special Topics
CBME 6980 Independent Project

Department of Computer Science & Engineering

Master of Science (MSc) in Big Data Technology

MSBD 5001 Foundations of Data Analytics
MSBD 5002 Data Mining and Knowledge Discovery
MSBD 5003 Big Data Computing
MSBD 5004 Mathematical Methods for Data Analysis
MSBD 5005 Data Visualization
MSBD 5006 Quantitative Analysis of Financial Time Series
MSBD 5007 Optimization and Matrix Computation
MSBD 5008 Introduction to Social Computing
MSBD 5009 Parallel Programming
MSBD 5010 Imaging: Data Analytics and Pattern Recognition
MSBD 5011 Advanced Statistics: Theory and Applications
MSBD 5012 Machine Learning
MSBD 5013 Statistical Prediction
MSBD 5014 Independent Project

Master of Science (MSc) in Information Technology

CSIT 5100 Object-Oriented Software Development of Enterprise Systems
CSIT 5110 Multimedia Application Development
CSIT 5130 Building Applications for Computational Finance
CSIT 5210 Data Mining and Knowledge Discovery
CSIT 5220 Reasoning and Decision under Uncertainty
CSIT 5300 Advanced Database Systems
CSIT 5400 Computer Graphics
CSIT 5410 Recognition Systems
CSIT 5510 Mobile Application Development
CSIT 5600 Internet Infrastructure: Switches and Routers
CSIT 5610 Computer Networks: An Internet Perspective
CSIT 5710 Cryptography and Security
CSIT 5720 Digital Forensic and Legal Issues
CSIT 6000 Topics in Information Technology
CSIT 6910 Independent Project
Department of Civil & Environmental Engineering

Master of Science (MSc) in Civil Infrastructural Engineering and Management
- CIEM 5100 Construction Technology
- CIEM 5130 Building Planning and Construction
- CIEM 5140 Construction Project Delivery
- CIEM 5150 Dispute Resolution for Engineers
- CIEM 5160 Construction Financial Management
- CIEM 5240 Advanced Concrete Technology
- CIEM 5250 Renovation Engineering
- CIEM 5310 Structural Analysis and Design of Tall Buildings
- CIEM 5320 Computer Aided Design Optimization of Tall Buildings
- CIEM 5330 Advanced Mechanics of Materials
- CIEM 5340 Earthquake Engineering
- CIEM 5350 Advanced Prestressed Concrete
- CIEM 5370 Wind Effects on Buildings and Structures
- CIEM 5380 Bridge Engineering
- CIEM 5390 Coastal Structures Design
- CIEM 5410 Risk Assessment and Contaminated Land Cleanup
- CIEM 5480 Wastewater Treatment and Reuse
- CIEM 5510 Hydraulics of Urban and Coastal Systems
- CIEM 5520 Travel Demand Analysis
- CIEM 5530 Traffic Control Fundamentals and Practice
- CIEM 5570 Fundamentals of Soil Behavior
- CIEM 5572 Advanced Foundation Design
- CIEM 5575 Tunnel and Cavern Engineering
- CIEM 5577 Unsaturated Soil Mechanics and Engineering
- CIEM 5579 Slope Engineering and Management
- CIEM 55810 Engineering Risk, Reliability and Decision
- CIEM 6000 Topics in Civil Infrastructural Engineering and Management
- CIEM 6980 MSc Project

Master of Science (MSc) in Environmental Engineering and Management
- JEVE 5260 Air Pollution Meteorology
- JEVE 5320 Water Quality and Assessment
- JEVE 5410 Risk Assessment and Contaminated Land Cleanup
- JEVE 5420 Biological Waste Treatment and Management
- JEVE 5430 Solid Waste Landfill Engineering Design
- JEVE 5460 Design and Management of Physico/Chemical Processes of Environmental Engineering
- JEVE 5470 Industrial Wastewater Treatment
- JEVE 5480 Wastewater Treatment and Reuse
- JEVE 5490 Modeling of Biological Treatment
- JEVE 5510 Municipal Hydraulic System Design and Management
- JEVE 5780 Advanced Physico-Chemical Treatment Processes
- JEVE 5810 Pollution Prevention and Cleaner Production
- JEVE 5820 Energy, Environment and Sustainable Development
- JEVE 5900 Carbon Management for Sustainable Environment
- JEVE 6000 Topics in Environmental Engineering
- JEVE 6980 Independent Project

Department of Electronic & Computer Engineering

Master of Science (MSc) in Electronic Engineering
- EESM 5000 CMOS VLSI Design
- EESM 5060 Embedded Systems
- EESM 5600 Photonics Technology and Applications
- EESM 5620 Flat Panel Displays
- EESM 5650 Digital Communication Networks and Systems
- EESM 5670 Advanced Computer and Networking Architectures
- EESM 5700 Image and Video Signal Processing
- EESM 5720 Signal Analysis and Pattern Recognition
- EESM 5730 Modern Control Systems Design
- EESM 5810 Business Development for Technological Innovations
- EESM 5900 Special Topics
- EESM 6900 Independent Study

Master of Science (MSc) in IC Design Engineering
- EESM 5000 CMOS VLSI Design
- EESM 5020 Digital VLSI System Design and Design Automation
- EESM 5060 Embedded Systems
- EESM 5100 Analog IC Analysis and Design
- EESM 5120 Advanced Analog IC Analysis and Design
- EESM 5200 Semiconductor Devices for Integrated Circuit Designs
- EESM 5310 Power Management Circuits and Systems
- EESM 5320 Radio-Frequency Integrated Circuits Design
- EESM 5810 Business Development for Technological Innovations
- EESM 5900 Special Topics
- EESM 5920 Topics in Analog IC Systems and Design
- EESM 6980 MSc Project

Master of Science (MSc) in Telecommunications
- EESM 5515 IP Networks
- EESM 5536 Digital Communications
- EESM 5539 Wireless Communication Networks
- EESM 5540 Introduction to Telecommunication Networks
- EESM 5546 Wireless Communication Systems
- EESM 5547 Multimedia Signal Processing
- EESM 5550 Online Social Networks
- EESM 5810 Business Development for Technological Innovations
- EESM 5900 Special Topics
- EESM 5910 Topics in Telecommunications and Network Convergence
- EESM 6980 MSc Project
### Department of Industrial Engineering & Logistics Management

**Master of Science (MSc) in Engineering Enterprise Management**

- EEMT 5100 Principles and Techniques for Technical Management
- EEMT 5120 Operation/Production Management
- EEMT 5160 Transportation and Logistics Management
- EEMT 5220 Six Sigma Quality Management
- EEMT 5360 Product Development Management
- EEMT 5300 Global Supply Chain Management
- EEMT 5360 IT System for Global Enterprise
- EEMT 5500 Engineering Statistics and Simulation
- EEMT 5510 Engineering Economics and Cost Management
- EEMT 5520 Service Operations Management
- EEMT 5530 Financial Engineering and Risk Management
- EEMT 5900 Problem Solving for Engineering Managers
- EEMT 6000 Special Topics in Engineering Enterprise Management
- EEMT 6900 Independent Study
- SBMT 5010 Accounting for Managers
- SBMT 5020 Fundamentals of Economics & Finance
- SBMT 5030 Marketing Management & Strategy

### Department of Mechanical & Aerospace Engineering

**Master of Science (MSc) in Aeronautical Engineering**

- AESF5050 Fracture Behavior of Polymers
- AESF5210 Fluid Dynamics
- AESF5310 Advanced Aerodynamics
- AESF5311 Robotics: Mechanics and Control
- AESF5320 Advanced Aircraft Structures
- AESF5330 Advanced Aircraft Design
- AESF5340 Aircraft Flight Dynamics
- AESF5350 Aircraft Propulsion
- AESF5360 Advanced Flow Instability
- AESF5370 Composites and Nanocomposites
- AESF5380 Computational Fluid Dynamics
- AESF5390 Computational Aeroacoustics
- AESF5410 Advanced Mechanical Behavior of Materials
- AESF5610 Air Transport System Overview
- AESF5620 Airplane Design Development and Operations
- AESF5630 Avionics Technology
- AESF5640 Air Traffic Management Overview
- AESF5660 Navigation Systems
- AESF5930 Finite Element Methods
- AESF6910 Special Topics
- AESF6960 Aeronautical Independent Project

### Master of Science (MSc) in Intelligent Building Technology and Management

- ISTM 5010 Intelligent Building Facility Management
- ISTM 5050 Intelligent Building System
- ISTM 5150 Advanced HVAC Systems
- ISTM 5200 Advanced Energy Conversion Systems
- ISTM 5260 Architectural Acoustics and Audio Systems
- ISTM 5300 Computational Methods in Building Environment Design
- ISTM 5330 Energy Management in Buildings
- ISTM 5430 Indoor Air Quality Technology and Management
- ISTM 5460 Materials in Built Environment
- ISTM 5470 Mechanical Vibration
- ISTM 5500 Occupational Safety and Health Issues in Buildings
- ISTM 5530 Risk Management and Decision-Making in Intelligent Building
- ISTM 5550 Financial Assessment of Intelligent Building Systems
- ISTM 5620 Electrical Facilities in Intelligent Buildings
- ISTM 6010 Special Topics in Intelligent Building Systems
- ISTM 6950 Independent Studies

### Master of Science (MSc) in Mechanical Engineering

- MESF 5010 Foundation of Solid Mechanics
- MESF 5040 Nanoscale Thin Films and Nano-Structured Materials
- MESF 5050 Fracture Behavior of Polymers
- MESF 5210 Fluid Dynamics
- MESF 5410 Advanced Mechanical Behavior of Materials
- MESF 5430 Thermodynamics and Kinetics of Materials
- MESF 5450 Intermediate Heat and Mass Transfer
- MESF 5480 Polymer Nanocomposites
- MESF 5520 Theories and Practice of CAD/CAM/CAE
- MESF 5550 Robotics
- MESF 5560 Precision Manufacturing Technologies
- MESF 5570 Precision Machining
- MESF 5920 Fundamentals of Electronic Packaging
- MESF 5930 Finite Element Methods
- MESF 6910 Special Topics in Mechanical Engineering
- MESF 6950 Independent Project

The course lists are tentative. Courses are offered subject to availability and at the discretion of the university.
Admission Requirements

Applicants must meet the general requirements for admission to the MSc programs and should possess a Bachelor’s degree in a related field. Some individual programs may have specific or additional entry requirements.

All classes are conducted in English. For applicants whose mother tongue is not English or are not graduated from University using English as the medium of instruction, in general, English proof such as Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) is required.

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MSc program, Professional Program Office
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http://www.seng.ust.hk/programs