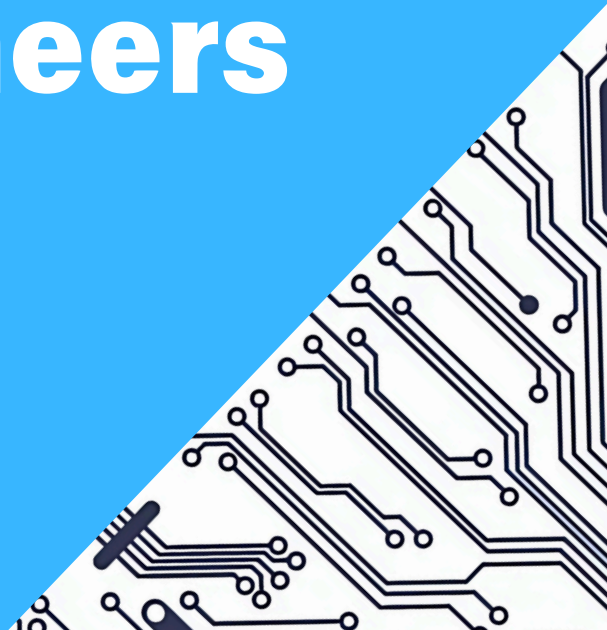


**2024-2025**

**Guidebook for  
First Year  
Engineers**





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## **Professor Henry Lam**

Director of Center for Engineering Education Innovation (E<sup>2</sup>I)  
The Hong Kong University of Science and Technology



# WELCOME MESSAGE

Welcome to HKUST, future engineers!

You are joining the Engineering family at an incredibly exciting time – both at the university and in the industry. Our rapidly evolving world presents complex challenges that drive significant advancements across various engineering disciplines. Recent developments in artificial intelligence, renewable energy, biomedical engineering, smart city and infrastructure, fintech, robotics, and microelectronics are pushing the boundaries of innovation. Our School offers countless exciting areas for you to learn and explore, reflecting the diverse strengths of our programs.

The School of Engineering of HKUST, which you will call home for the next few years, is among the very best in our corner of the world. Our curriculum is designed to equip you with both technical proficiency and transferable skills, and prepare you for any career paths you desire. Your first year is a crucial period, marking a unique phase in your educational journey where you have the autonomy to choose what and how you study. You will find that the classroom is only a small part of your university experience, and a wide variety of other life-changing learning opportunities await you. You will meet many new people, including our passionate faculty and staff, senior students and fellow classmates, who come from all over the world. You will become part of our community, upon which you will find support to pursue your dreams.

For more information on what to do before the semester starts, please visit our website (<http://sengreg.hkust.edu.hk/>). If you have any academic queries, do not hesitate to ask our peer mentors and colleagues at the Center for Engineering Education Innovation (E<sup>2</sup>I). You can also visit them directly in the advising office located on the 2/F Engineering Commons (Rm 2581, Lift 27-28).

Once again, welcome, and may I wish you a fruitful and joyful journey at HKUST!

Best wishes,



Professor Henry LAM

Director

Center for Engineering Education Innovation (E<sup>2</sup>I)

The Hong Kong University of Science and Technology

# YOUR JOURNEY THIS YEAR

Congratulations!

You are now a part of the School of Engineering (SENG)  
at The Hong Kong University of Science and Technology!



**Registration**

**Pre-enrollment**

**House Assignment**

This guide aims to help launch your undergraduate journey and create a successful academic path.

This guidebook contains important information and dates that you will need to begin your life in the school.

**SENG Orientation**



**Major Selection**



The path on these 2 pages are the things that you will have to go through in the coming year.

# REGISTRATION & INDUCTION

Completing the online registration is compulsory for joining the SENG community.

Once you have your student ID number, you can follow the guide to activate your ITSC network account and pre-enroll in courses.

To activate your ITSC network account, please scan the QR code on the right.



## **ITSC Account:**

Every student is provided with an ITSC network account for accessing various campus services and computers within the campus. Please remember your ITSC login and password as you will need to use them frequently.

## Student ID Card:

Your Student ID Card will be issued after you have completed the online registration process. This card will serve as your library card, access card and electronic payment system for the university services like printing from the campus printers.



## SENG's Houses:

All Engineering undergraduates are required to join a house as a part of the First-Year SENG academic advising program. Each house is supported by the SENG Faculty, Academic Advisors, and Senior Year Peer Mentors to help you have a successful transition to university.



To become a registered student, you will need to complete both the program registration and class enrollment procedures before the deadlines.

## Important Dates:

Deadline for Pre-enrollment: **10 Aug 2024, 5:30 PM**

Class Validation: **23 August 2024**

Class Enrollment: **27-28 Aug 2024**

SENG Welcome & Orientation: **28 Aug 2024**

Commencement of Fall semester: **2 Sep 2024**

Add/Drop Period: **2-14 Sep 2024**

**Each student will have a designated enrollment start time which they may check from their SIS.**



# Class Enrollment:

Before beginning the enrollment process, make sure you have activated your ITSC network account.



## Step 1: Pre-enrollment

The following required courses have already been pre-enrolled for you. Credit transfers may be applicable.

Course Code	Course Name	Credit Bearing
MATH 1012/ MATH 1013	Calculus IA/ Calculus IB	4/ 3 Credits
LANG 1402/ LANG 1407	English for University Studies/ Academic English for Engineering Studies	3 Credits
HMAW 1905B	Behavioural Foundations of University Education: Habits, Mindsets, and Wellness	3 Credits

During this process, you may also pre-enroll for additional courses. For the complete list of courses available for pre-enrollment, please see P.14 - 26.

Please ensure that you finalize your course registration and submit your pre-enrollment selections for the Fall semester by **10th August 2024, 17:30.**





## Step 2: Class enrollment

Aside from the pre-enrolled courses, you may also add all other courses during this period. It's recommended that you take **15 to 18 credits** per semester. See the FAQ for further course enrollment detailed.



# SCHOOL WELCOME & ORIENTATION

This is the official undergraduate orientation day from SENG.

This event is designed for participants to mingle with each other while having fun solving team challenges.

The orientation day will provide you with a memorable experience with your new friends in the assigned house.

**The School Welcoming Day this year will be held on 28 Aug 2024.**



# INFO PAGE FOR FIRST-YEAR ENGINEERS



Canvas is a learning management system available for many courses. You will find course materials and receive the announcements on it. You may also be required to submit assignments, quizzes, or even exam for some courses via Canvas.



Remember to check your HKUST email daily! Official announcements and important messages will be sent to you through the your ITSC email.

# ACADEMIC ADVISING

The Center for Engineering Education Innovation (E<sup>2</sup>I) facilitates SENG's advising program for First-Year students. We are here to support you in your academic pursuits and to provide a sense of belonging to the SENG community at HKUST. Our dedicated team of Faculty Advisors and Academic Advisors are here to help you navigate through your undergraduate journey.

## Faculty Advisors

Faculty Advisors from different Engineering majors serve as professional mentors who are here to share their experience and support your academic pursuits. Meeting with them is an excellent opportunity to learn more about major programs, research and career opportunities for graduate study. Details of the sharing/ meeting will be announced on Canvas.

## Academic Advisors

Academic Advisors at E<sup>2</sup>I serve as your main resources for academic advising. They are here to help you develop your educational plans and can guide you on a range of academic issues from course enrollment to major selection. You can find them in the Advising Office, at the Engineering Commons.

You can also contact them at (852) 2358 5934/ 2358 5935 or [sengadvisor@ust.hk](mailto:sengadvisor@ust.hk).



# PEER MENTORING PROGRAM

Peer mentors are upper-year engineering students who provide support and advice to first year SENG students. First-Year engineering advising through the PMP is based on a house system. The members of each house consist a mix of local, mainland and international First-Year engineering undergraduates. Every house is supported by SENG Faculty, Academic Advisors and Senior Year Peer Mentors. To provide support and advice through peer mentoring sessions, the PMP offers holistic student development workshops to enhance the student learning experience and development.

## SENG's Houses

The Peer Mentors in each house are friendly individuals who are passionate about helping incoming engineering undergraduates adapt to the SENG community. Each house will plan its own activities and gatherings, so select a house based on your interests! Watch out for opportunities to participate in joint house events. These events are great for meeting people from other houses.

The 4 houses that belong to SENG are:  
**Blaze**, **Neptune**,  
**Sage** and **Ravens**



# MAJOR PROGRAM CHOICES

Every First-Year student can declare their major program at the end of their year one study if they have fulfilled the requirements. **Here are the programs that the SENG are providing.**

SENG	CBE	BEng in Bioengineering BEng in Chemical Engineering BEng in Chemical and Environmental Engineering*
	CIVL	BEng in Civil Engineering BEng in Civil and Environmental and Engineering
	CPEG	BEng in Computer Engineering
	CSE	BEng in Computer Science
	ECE	BEng in Electronic Engineering
	IEDA	BEng in Industrial Engineering and Engineering Management BEng in Decision Analytics
	MAE	BEng in Aerospace Engineering BEng in Mechanical Engineering
	SUSEE	BEng in Sustainable Energy Engineering*
SENG x SSCI	DSCT	BSc in Data Science and Technology*
AIS	ISDN	BSc in Integrative Systems and Design
	EVMT	Environmental Management and Technology
	DDP	BEng in one of the School of Engineering Majors & BBA (a 5-Year program)
SENG x SBM x SSCI	RMBI	Risk Management and Business Intelligence

- **No dual degree program is offered for the program with \***

For more  
information



To learn more about  
Extended Majors



# COURSES FOR PRE-ENROLLMENT

Students can learn more about each engineering program by enrolling in **introduction courses**.

The following list is for First Year students to choose for their pre-enrollment.

**(Credit transfer may be applicable)**



## Courses that are already pre-enrolled for you:

HMAW 1905B	Behavioural Foundations of University Education: Habits, Mindsets, and Wellness	3 Credits
<p>This course will help students adapt to university life through advising, sharing and discussion, and applying the science of well-being to enhance their personal and interpersonal development. It also aims to foster their self-understanding and confidence as young adults who can fully enjoy their university education and career thereafter. The course has 3 components: Lectures and Seminars, Self-Directed Experience, and Advising and Community Meetings. Lectures and Seminars will orientate students to their respective Schools/IPO, provide academic advice and equip them with the scientific bases of well-being. Self-Directed Experience will provide opportunities to develop mindsets and habits for students' physical and social-emotional wellness and personal enrichment. In Advising and Community Meetings, students will bring knowledge and skills together through reflection and discussion with peers and School/IPO advisors. Topics such as learning and time management skills, purpose of university education, and planning for personal and professional development will be covered. Graded PP, P or F.</p>		
<p>EXCLUSION: IDPO 1010</p>		

<b>MATH 1012</b>	<b>Calculus IA</b>	<b>4 Credits</b>
<p>This is an introductory course in one-variable calculus, the first in the Calculus I and II sequence, designed for students that have not taken HKDSE Mathematics Extended Module M1 or M2. Topics include functions and their limits, continuity, derivatives and rules of differentiation, applications of derivatives, and basic integral calculus.</p>		
<p><b>EXCLUSION:</b> Level 3 or above in HKDSE Mathematics Extended Module M1 or M2; MATH 1003, MATH 1013, MATH 1014, MATH 1020, MATH 1023, MATH 1024</p>		

<b>MATH 1013</b>	<b>Calculus IB</b>	<b>3 Credits</b>
<p>This is an introductory course in one-variable calculus, the first in the Calculus I and II sequence, designed for students that have taken HKDSE Mathematics Extended Module M1/M2. Topics include functions and their limits, continuity, derivatives and rules of differentiation, applications of derivatives, and basic integral calculus.</p>		
<p><b>EXCLUSION:</b> MATH 1012, MATH 1014, MATH 1020, MATH 1023, MATH 1024</p> <p><b>PRE-REQUISITE:</b> Level 3 or above in HKDSE Mathematics Extended Module M1/M2</p>		



<b>MATH 1014</b>	<b>Calculus II</b>	<b>3 Credits</b>
<p>This is an introductory course in one-variable calculus, the second in the MATH 1013 – MATH 1014 sequence. Topics include applications of definite integral, improper integrals, vectors, curves and parametric equations, modeling with differential equations, solving simple differential equations, infinite sequences and series, power series and Taylor series.</p>		
<p>EXCLUSION: MATH 1020, MATH 1024</p> <p>PRE-REQUISITE: MATH 1012 OR MATH 1013 OR MATH 1023 OR grade A- or above in MATH 1003</p>		

<b>LANG 1402</b>	<b>English for University Studies</b>	<b>3 Credits</b>
<p>This course aims for students in their first year of study and will develop students' spoken and written language proficiency. The course also introduces academic literacy skills common to all disciplines. Students will learn to evaluate others' opinions, develop strong arguments and communicate those arguments effectively in written and spoken English. In addition to traditional academic writing, the course includes elements of academic communication that go beyond the text level to incorporate academic communication that includes text and audio. They will also build skills and habits for self-directed learning at university.</p>		



<b>LANG 1407</b>	<b>Academic English for Engineering Studies</b>	<b>3 Credits</b>
<p>This course puts a strong emphasis on the academic literacy skills essential for engineering studies. The course introduces students to the research skills for finding and evaluating sources for discipline-related writing and speaking tasks. Students are expected to be critical readers and writers, synthesizing ideas from different sources when developing a coherent argument. The course also aims to develop students' competence in communicating effectively in a wider community beyond the university, developing the ability to collaborate both as a member and leader of a group. Throughout the course, students are expected to transfer and adapt their knowledge, attitudes and habits for autonomous lifelong learning.</p>		
<p>EXCLUSION: LANG 1403, LANG 1404, LANG 1406, LANG 1408, LANG 1409</p> <p>PRE-REQUISITE: LANG 1402 OR Level 5 in HKDSE English Language with all papers at or above Level 4 OR Overall bandscore of 6.5 in IELTS with all subscores at or above 6.0 OR equivalence of the above</p>		

## Students may also choose from the following Engineering Introduction courses from e-Advising:

<b>CENG 1000 (Fall only)</b>	<b>Introduction to Chemical and Biological Engineering</b>	<b>3 Credits</b>
<p>From chemistry to engineering, molecules to useful products. Physical, chemical and biochemical transformation of materials. Survey of industries related to modern chemical and biological engineering. Basic principles of materials and energy balance. Strategy of molecular synthesis, process selection and design, economic and environmental considerations. Examples taken from a diverse range of products spanning realms of food, consumer products, energy, environment, and medicine. Case studies and team projects on process and product design. For engineering students only.</p>		

<b>CENG 1500</b> <b>(Spring only)</b>	<b>A First Course on Materials Science and Applications</b>	<b>3 Credits</b>
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The scope of this course is to introduce different categories of materials and to elucidate their applications. We will start from the basic concepts of matter to the basic structures at molecular scale, and then to the science and engineering of materials. The focus of the course is the structure/property relationship. The principles for designing and developing useful materials for special applications will be discussed.

EXCLUSION: MECH 2410, PHYS 3040

<b>CENG 1700</b> <b>(Fall only)</b>	<b>Introduction to Environmental Engineering</b>	<b>3 Credits</b>
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Fundamentals of environmental impact assessment will be discussed. Life cycle analysis of carbon and energy will be introduced using case studies. Principles of environmental engineering for control of air, water, solid and noise pollution will be discussed, including global pollution, pollution prevention and minimization. Cost of available technologies will be analyzed.

EXCLUSION: CIVL 2410



<b>CIVL 1100</b>	<b>Discovering Civil and Environmental Engineering</b>	<b>3 Credits</b>
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A general overview of civil and environmental engineering, infrastructure development and engineering ethics is provided. The course includes both lectures and laboratory sessions, where the laboratory sessions are primarily directed to students who require the development of feasible conceptual solutions for the analysis and design of the basic problems in structural, geotechnical and environmental engineering. For first year engineering students under the four-year degree curriculum only.

<b>CIVL 1210 (Spring only)</b>	<b>Fundamental of Green Buildings</b>	<b>3 Credits</b>
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This course contains two parts. The first part is about indoor environment of green building. It covers the four aspects of indoor environment quality (thermal, indoor air quality, lighting, and acoustic), building energy load calculation and energy efficient design. The second part covers the interaction between building and outdoor environment. Principles of radiation exchange, heat transfer and surface energy balance in the context of urban environment are included.



<b>COMP 1021</b>	<b>Introduction to Computer Science</b>	<b>3 Credits</b>
<p>This course introduces students to the world of Computer Science. Students will experience a range of fun and interesting areas from the world of computing, such as game programming, web programming, user interface design and computer graphics. These will be explored largely by programming in the Python language.</p>		
<p>EXCLUSION: COMP 1022P, COMP 1022Q (prior to 2020-21), COMP 2011, COMP 2012H</p>		

<b>ELEC 1100</b>	<b>Introduction to Electro-Robot Design</b>	<b>4 Credits</b>
<p>The course introduces the fundamental knowledge on the design, implementation and evaluation of a robot and its sub-systems. It covers the basic principles of analog and digital circuits as well as robot sensing and control mechanisms. Students have to apply the knowledge and principles learned to design and build a functional robot by the end of the course. Students who have completed ELEC 2200, ELEC 2350, ELEC 2400, ELEC 2420, or ELEC 3310, must obtain instructor's approval to take this course.</p>		

<b>ELEC 1200</b>	<b>A System View of Communications: from Signals to Packets</b>	<b>4 Credits</b>
<p>Have you ever wondered what technologies go into your mobile phone or a WiFi hotspot? Through hands on work with a simple but fully functional wireless communication system, you will understand the basic engineering tools used and tradeoffs encountered in the design of these systems. This course is centered on weekly laboratories, each designed to introduce an important concept in the design of these systems. The lab sessions are supported by two one-hour lectures and a tutorial that introduce the concepts for the next laboratory, as well as reviewing and expanding the concepts learned in the previous laboratory.</p>		
<p>CO-REQUISITE: (COMP 1021 OR COMP 1022P) AND (MATH 1003 OR MATH 1014 OR MATH 1020 OR MATH 1024)</p>		

<b>ENGG 1100 (Fall only)</b>	<b>First Year Cornerstone Engineering Design Project Course</b>	<b>3 Credits</b>
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This project course is designed specifically for first year engineering students. This course aims at providing engineering students experiential learning experience through exposing students to knowledge and skills from different SENG disciplines before making decision on their majors. Students in this course will be divided into design teams. Each team will use the acquired knowledge and skills to design and build an engineering artifact, e.g. an airship. In order to offer the course at scale, the technical components will be offered online and students would be engaged in experiential learning through working on team projects. For First year Engineering students only.

EXCLUSION: ENGG 1200

<b>IEDA 2010</b>	<b>Introduction of Industrial Engineering and Decision Analytics</b>	<b>3 Credits</b>
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This course provides an introduction to industrial engineering and decision analytics (IEDA). It comprises of two parts. The first part introduces basic IE analytical tools, such as optimization, game theory, probability and statistics, at a conceptual level. In the second part, many of the IEDA practical concepts, including production and operations management, logistics and supply chain management, financial technology are introduced.

EXCLUSION: IEDA 2200

<b>ISDN 1001</b>	<b>Introduction to Integrative Systems and Design</b>	<b>3 Credits</b>
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This is a foundation course in which students will learn about the societal, economical, and cultural impact of integrative systems and the importance of integrating design into the creation of integrative systems. Through lectures, discussions, case-study and presentation, hands-on dis-assembly and re-assembly exercises, students will learn about the basic design principles, design terminology, design skill-sets, design thinking and process, and how a good design relates to the design principles. Students will also learn about what is an integrative system and the importance of using technology to build an integrative system and how it is decomposed into different sub-systems that involve multiple technology components, interacting with each other.

**ISDN 1002**  
**(Fall only)**

**Redefining Problems for the Real Needs**

**3 Credits**

Design Research is an introduction of research methodology and methods used for exploring problems as well as identifying opportunities for design initiatives. It guides designers how to unravel needs and problems in the real world before inventing. This course introduces students various design research principles, methods and ethics for investigating people and their world. It is a learning-by-doing course in which students, work in groups, learn the principles in class and apply them in the field. The course sets out several challenges in local context. After conducting both contextual research and user research, students are guided to seek insights and identify opportunities for technological innovation aiming to solve the identified problems. Overall, students explore the real world in a lively yet methodical way.

**ISDN 1006**  
**(Spring only)**

**Human-centered Innovation**

**3 Credits**

A project-based, experiential course that exposes students to practice the five modules in design thinking - “Empathize”, “Define”, “Ideate”, “Prototype” and “Test”. The unmet needs will be identified by observing the daily routine of real services and people. Research on existing solutions and how to conduct the stakeholder and market analyses will be taught for designing the needs screening matrix in needs selection. Students are going to unlock their creativity potentials through the in-class activities. The new ideas of addressing the unmet needs are generated in which the ideas are grouped and organized into a concept map. To translate a promising concept from an idea into a rudimentary design, the concept exploration is facilitated by prototyping. The prototypes are tested by the potential users. This course aims to develop students’ communication, interpersonal, analytical, design and project management skills.

CO-REQUISITE: ISDN 1002



<b>MECH 1902</b> <b>(Fall only)</b>	<b>Energy Systems in a Sustainable World</b>	<b>3 Credits</b>
<p>Various fuels used by mankind, fossil and renewable sources; power generation technologies and the controversies; energy efficient technologies and the applications in buildings and consumable products; energy efficient manufacturing technologies; low energy infrastructure and impact to modern life style; myths behind sustainable energy systems and the debates; energy entrepreneurship, case studies and social impact.</p>		

<b>MECH 1906</b> <b>(Spring only)</b>	<b>Mechanical Engineering for Modern Life</b>	<b>3 Credits</b>
<p>Mechanical Engineering covers the broadest range of engineering amongst all related disciplines. In addition to the production of modern products useful in daily life, it is also associated with power generation and distribution, as well as new materials development. These will be used to explain mechanical engineering principles and their usage in product design and manufacture. Contents include Engineering Materials, Solid Mechanics and Structural Design, Renewable Energy, Indoor Environmental Quality, Smart Green Building, Energy Design, Sensors and Instrumentation, Robots and Controls, together with MEMS and LED Fabrication. First year students are preferred.</p>		

<b>MECH 1907</b> <b>(Fall only)</b>	<b>Introduction to Aerospace Engineering</b>	<b>3 Credits</b>
<p>Introduction to the field of Aerospace engineering, discussion of basic aerospace systems and disciplines, working vocabulary of the field. Basic concepts. Demonstration through examples.</p>		



<b>BIEN 1010 (Spring only)</b>	<b>Introduction to Biomedical Engineering</b>	<b>3 Credits</b>
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This course is designed as an introductory course in biomedical engineering. The aim of this course is to present some of the basic science and human physiology knowledge used by biomedical engineers and illustrates the first steps in applying this knowledge to solve problems in human medicine. The second goal of this course is to link knowledge of basic science and engineering to fields of specialization and current research. This course also introduces the sub-specialties in biomedical engineering and through real-life examples to emphasize the types of problems biomedical engineers solve.

### The following list is for the Science Fundamental courses:

<b>CHEM 1008</b>	<b>Introductory Chemistry</b>	<b>3 Credits</b>
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This course targets science or engineering students with very little to no chemistry background. It provides a general introduction to basic principles of chemistry. Key topics include state of matters, atoms and elements, molecules and compounds, atomic structures and periodicity, molecular structures, quantities in chemical reactions, bonding theories, acids and bases, and solution chemistry. Students without HKDSE qualifications may seek instructor's approval for enrolment.

**EXCLUSION:** Level 3 or above in HKDSE 1/2x Chemistry OR HKDSE 1x Chemistry, any CHEM courses at or above 1004-level, CORE 1120





<b>CHEM 1012</b>	<b>General Chemistry B: Atomic structure, molecules and bonding theory</b>	<b>3 Credits</b>
<p>This course targets at students who have acquired prior knowledge in fundamental Chemistry in high school. Key topics include atomic structure and periodicity, molecules, bonding theories, and properties of gases, liquids and solids. Other topics such as transition metals and coordination compounds, and organic molecules will be briefly reviewed.</p>		
<p>PRE-REQUISITE: Level 3 or above in HKDSE 1/2x OR level 3 or above in HKDSE 1x Chemistry OR CHEM 1004 OR CHEM 1008</p> <p>EXCLUSION: CHEM 1010</p>		

<b>LIFS 1901</b>	<b>General Biology I</b>	<b>3 Credits</b>
<p>This course targets science students not having taken HKDSE 1x Biology or AL/AS Biology. It provides students with a general overview of fundamental biology: basic characteristics of life (the chemistry of life, cells), vital life processes (respiration, photosynthesis, genetics), essential concepts of evolution and ecology, and so on. Students without HKDSE qualifications may seek instructor's approval for enrolment.</p>		
<p>EXCLUSION: Level 3 or above in HKDSE 1x Biology</p>		



<b>PHYS 1101</b>	<b>Introductory Physics</b>	<b>4 Credits</b>
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This course is for students with no physics background. It can serve as a standalone introduction to physics or as a preparatory course for students who intend to take PHYS 1112. It is not a preparatory course for PHYS 1111; students with no calculus background who plan to take General Physics should take calculus concurrently with PHYS 1101 so that they meet the prerequisites for PHYS 1112. Topics covered include heat and gases, force and motion, waves, and electricity and magnetism. Students without HKDSE qualifications may seek instructor's approval for enrolment.

**EXCLUSION:** Level 3 or above in HKDSE 1/2x Physics or HKDSE 1x Physics; any PHYS courses at 1100-level or above

<b>PHYS 1112</b>	<b>General Physics I with Calculus</b>	<b>3 Credits</b>
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PHYS 1111 and PHYS 1112 target students who have learned the most basic knowledge in physics in high school. Students with more advanced physics background should consider taking PHYS 1312. PHYS 1112 employs a calculus-based approach. Students without knowledge of calculus should take PHYS 1111 instead. Key topics include motions and Newton's Laws, work and energy, conservation of energy and momentum, rotation, rigid body, simple harmonic and damped oscillations, forced oscillations, standing waves and sound waves, kinetic theory and the laws of thermodynamics. Students without the physics prerequisite but who have taken PHYS 1101 or equivalent, and/or without the mathematics prerequisite but who have taken MATH 1012/ MATH 1013/ MATH 1020/ MATH 1023 or equivalent may seek instructor's approval for enrolling in the course.

**EXCLUSION:** PHYS 1111, PHYS 1312

**PRE-REQUISITE:** (Level 3 or above in HKDSE 1/2x OR in HKDSE 1x Physics) AND Level 3 or above in HKDSE Mathematics Extended Module M1/M2





## Engineering Introduction Courses

The following engineering introduction courses enable students to get a taste of knowledge and skills from various engineering disciplines before deciding on their majors.

Students should take at least 2 courses from this list in their first year of study.

### Engineering Introduction courses include:

- BIEN 1010
- CENG 1000, 1500, 1700
- CIVL 1100, 1210
- COMP 1021
- ELEC 1100, 1200
- ENGG 1100
- IEDA 2010
- ISDN 1001, 1002, 1006
- MECH 1902, 1906, 1907



# COMMON CORE COURSES

University education is more than just professional training. The common core courses bring students a balanced and broad education that nurtures them to be responsible citizens and independent thinkers with the heart and aspiration to excel in their endeavours. Apart from the Major Program requirements, students are also required to take a total of 30 credits from 3 tiers of common core groups, which provide students with more interdisciplinary and experiential learning opportunities.

Common Core Groups	Common Core Areas	Required Credits
<b>Experiencing</b> <i>(no prerequisites, but encourage design of courses for Year 3 or above students)</i>	Undergraduate experiential Opportunities Programs (UxOP): <ul style="list-style-type: none"> <li>• Undergraduate Research Opportunities Program (UROP);</li> <li>• Undergraduate Teaching Opportunities Program (UTOP);</li> <li>• Undergraduate Practice Opportunities Program (UPOP);</li> <li>• Undergraduate Global Challenges and Opportunities Program (UCOP)</li> </ul>	3 credits <i>(substitutable by courses from the areas of CTDL, E-Comm (Advanced Communication courses only), C-Comm, A, H, S, T, and SA)</i>
<b>Broadening</b> <b>(with specific outcomes)</b>	Arts (A) Humanities (H) Science (S) Technology (T) Social Analysis (SA)	12 credits under stipulated program-specific areas
<b>Foundations</b> <b>(skillsets &amp; mindsets)</b> <i>(preferably taken in Year 1)</i>	Cognitive Foundations of University Education: Critical Thinking and Data Literacy (CTDL) <i>(in any year)</i>	3 credits <i>(substitutable by courses from the areas of E-Comm (Advanced Communication courses only), C-Comm, A, H, S, T, SA, and UxOP)</i>
	Behavioral Foundations of University Education: Habits, Mindsets, and Wellness (HMW) <i>(year-long in Year 1)</i>	3
	English Communication (E-Comm) <i>(at least 3 credits in Year 1)</i>	6
	Chinese Communication (C-Comm) <i>(in any year)</i>	3
	<b>Total Credits Required</b>	<b>30</b>

Scan the QR code to find the course list and further details of the common core framework.



# ACADEMIC CALENDAR



## THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY Calendar Dates in the 2024-25 Academic Year

Week	S	M	T	W	T	F	S	Events	General Holidays
<b>August, 2024</b>									
				1	2	3			
	4	5	6	7	8	9	10	10 Last day of Summer Term, 2023-24	
	11	12	13	14	15	16	17		
	18	19	20	21	22	23	24		
	25	26	27	28	29	30	31	27-28 Class Enrollment starts – All UG students * 27 Class Enrollment starts – All PG students * [* A validation period for class enrollment will be arranged prior to these dates]	
<b>September</b>									
1	1	2	3	4	5	6	7	1 Last day for submission of final thesis examination results and thesis copies for Summer 2023-24 2 Commencement of the 2024-25 Academic Year	
2	8	9	10	11	12	13	14	2 Fall Term commences	
3	15	16	17	18	19	20	21	2-14 Add/Drop Period	18 The day following the Chinese Mid-Autumn Festival
4	22	23	24	25	26	27	28	16-30 Extended Drop Period – for PG courses only	
5	29	30							
<b>October</b>									
5		1	2	3	4	5			1 The National Day
6	6	7	8	9	10	11	12		11 Chung Yeung Festival
7	13	14	15	16	17	18	19		
8	20	21	22	23	24	25	26		
9	27	28	29	30	31				
<b>November</b>									
9						1	2		
10	3	4	5	6	7	8	9		
11	10	11	12	13	14	15	16		
12	17	18	19	20	21	22	23		
13	24	25	26	27	28	29	30	30 Last day of Fall Term classes	
<b>December</b>									
	1	2	3	4	5	6	7	2-7 Study Break	
	8	9	10	11	12	13	14	9-20 Fall Term Examinations	
	15	16	17	18	19	20	21	20 Last day of Fall Term	
	22	23	24	25	26	27	28		25 Christmas Day
	29	30	31						26 The first weekday after Christmas Day

Public holiday



First/Last day of Term classes

Examination Period/Break

**Boldtype**

Important dates for students to note

Week	S	M	T	W	T	F	S	Events	General Holidays	
<b>January, 2025</b>								1	Last day for submission of final thesis examination results and thesis copies for Fall	<b>1</b> The first day of January  <b>29</b> Lunar New Year's Day <b>30</b> The second day of Lunar New Year <b>31</b> The third day of Lunar New Year
			<b>1</b>	<b>2</b>	3	4		2	Winter Term commences	
	<b>5</b>	6	7	8	9	10	11	23-24	Class Enrollment starts – All UG students *	
	<b>12</b>	13	14	15	16	17	18	23	Class Enrollment starts – All PG students *	
	<b>19</b>	20	21	22	<b>23</b>	<b>24</b>	25	[* A validation period for class enrollment will be arranged prior to these dates]		
	<b>26</b>	27	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>		28	Last day of Winter Term	
<b>February</b>								2	Last day for submission of final thesis examination results and thesis copies for Winter	
							1	3	Spring Term commences	
1	<b>2</b>	<b>3</b>	4	5	6	7	8	3-15	Add/Drop Period	
2	9	10	11	12	13	14	15	17/2-1/3	Extended Drop Period – for PG courses only	
3	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>			
4	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>				
<b>March</b>										
4							1			
5	2	3	4	5	6	7	8			
6	9	10	11	12	13	14	15			
7	16	17	18	19	20	21	22			
8	23	24	25	26	27	28	29			
9	30	31								
<b>April</b>										
9			1	2	3	4	5	1-4	Mid-Term Break	
9	6	7	8	9	10	11	12			
10	13	14	15	16	17	18	19			
11	20	21	22	23	24	25	26			
12	27	28	29	30						
<b>May</b>										
12				1	2	3				
13	4	5	6	7	8	9	10	10	Last day of Spring Term classes	
	11	12	13	14	15	16	17	12-16	Study Break	
	18	19	20	21	22	23	24	17-29	Spring Term Examinations	
	25	26	27	28	29	30	31	29	Last day of Spring Term	
<b>June</b>										
	1	2	3	4	5	6	7	15	Last day for submission of final thesis examination results and thesis copies for Spring	
	8	9	10	11	12	13	14	16/6-9/8	Summer Term	
	15	16	17	18	19	20	21			
	22	23	24	25	26	27	28			
	29	30								
<b>July</b>										
		1	2	3	4	5				
	6	7	8	9	10	11	12			
	13	14	15	16	17	18	19			
	20	21	22	23	24	25	26			
	27	28	29	30	31					
									<b>1</b> Hong Kong Special Administrative Region Establishment Day	

**Academic Year 2025-26 (Provisional)**

Fall Term 1 September – 19 December 2025  
 Winter Term 2 – 29 January 2026  
 Spring Term 2 February – 29 May 2026

Summer Term 15 June – 8 August 2026  
 Study Breaks 1 – 6 December 2025 and 11 – 15 May 2026  
 Mid-Term Break 3 – 8 April 2026

# DIRECTORY

## School of Engineering

### Office of the Dean of Engineering

6/F, Academic Building, Rm. 6542 (Lift 27-28)

Web: <https://seng.hkust.edu.hk>

Email: [sengug@ust.hk](mailto:sengug@ust.hk)

Tel: (852) 2358 8998



### Overseas Exchange Enquires

Web: <https://seng.hkust.edu.hk/academics/undergraduate/exchange>



### Center for Engineering Education Innovation (Advising Office)

2/F, Academic Building, Rm. 2581 (Lift 27-28)

Web: <https://e2i.hkust.edu.hk>

Email: [sengadvisor@ust.hk](mailto:sengadvisor@ust.hk)

Tel: (852) 2358 5934 / (852) 2358 5935



## Department / Program Office

### Dept. of Chemical and Biological Engineering

4/F, Academic Building, Rm. 4566 (Lift 27-28)

Web: <https://cbe.hkust.edu.hk>

Email: [cbe@ust.hk](mailto:cbe@ust.hk)

Tel: (852) 2358 7130



### Dept. of Civil and Environmental Engineering

3/F, Academic Building, Rm. 3575 (Lift 27-28)

Web: <http://www.ce.ust.hk>

Email: [civilweb@ust.hk](mailto:civilweb@ust.hk)

Tel: (852) 2358 7154



## Department/ Program Office

### **Dept. of Computer Science and Engineering**

3/F, Academic Building, Rm. 3528 (Lift 25-26)

Web: <https://cse.hkust.edu.hk>

Email: [csdept@cse.ust.hk](mailto:csdept@cse.ust.hk)

Tel: (852) 2358 7000



### **Dept. of Electronic and Computer Engineering**

2/F, Academic Building, Rm. 2457 (Lift 25-26)

Web: <https://ece.hkust.edu.hk>

Email: [eequestions@ust.hk](mailto:eequestions@ust.hk)

Tel: (852) 2358 7036



### **Dept. of Industrial Engineering and Decision Analytics**

5/F, Academic Building, Rm. 5551 (Lift 27-28)

Web: <https://ieda.ust.hk/eng/index.php>

Email: [ieug@ust.hk](mailto:ieug@ust.hk)

Tel: (852) 2358 7100



### **Dept. of Mechanical and Aerospace Engineering**

2/F, Academic Building, Rm. 2568 (Lift 27-28)

Web: <https://mae.hkust.edu.hk>

Email: [menquiry@ust.hk](mailto:menquiry@ust.hk)

Tel: (852) 2358 8654



### **Computer Engineering Program Office**

2/F, Academic Building, Rm. 2457 (Lift 25-26)

Web: <https://cpeg.hkust.edu.hk>

Email: [ustcpeg@ust.hk](mailto:ustcpeg@ust.hk)

Tel: (852) 2358 8512



### **Academy of Interdisciplinary Studies Office**

4/F, Academic Building, Rm. 4376 (Lift 17-18)

Web: <https://ais.hkust.edu.hk>

Email: [ais@ust.hk](mailto:ais@ust.hk)

Tel: (852) 3469 2482





## Others

### **Scholarships and Financial Aid Office**

5/F, Academic Building, Rm. 4592 (Lift 29-30)

Web: <https://sfao.hkust.edu.hk>

Email: [sfao@ust.hk](mailto:sfao@ust.hk)

Tel: (852) 2358 5853



### **Student Housing and Residential Life Office**

G/F, HG Hall II

Web: <https://shrl.hkust.edu.hk>

Email: [ughousing@ust.hk](mailto:ughousing@ust.hk)

Tel: (852) 2358 6664



### **Academic Registry Office**

1/F, Academic Building, Rm. 1381 (Lift 17-18)

Web: <https://registry.hkust.edu.hk>

Email: [registry@ust.hk](mailto:registry@ust.hk)

Tel: (852) 2623 1111

# Useful Links



**UG Academic Guidelines**



**UG Credit Transfer**



**e-Advising System**



**UG Course Schedule**

# FREQUENTLY ASKED QUESTIONS

## **What courses do I need to take for my program?**

A list of course descriptions and credit requirements for all undergraduate programs offered at HKUST can be found in the Program Catalog and Course Catalog.

## **How do I enroll in courses?**

Official course enrollment is completed online through the student Information System (SIS). Registered students can access SIS via “Student Intranet” at [https://hkust.edu.hk/stu\\_intranet](https://hkust.edu.hk/stu_intranet)

Details and instructions for completing this process can be found on the ARO website by scanning the QR code below.



## **How do I get credit transfer?**

Students may be granted transfer credits in recognition of studies completed prior to admission to HKUST. Details on the application procedures for credit transfers are given on the ARO website. A database listing the courses that have been approved for transfer credits can be found in the section entitled “Course Equivalence Database”.

## What are prerequisites, co-requisites, and exclusions?

According to HKUST's Academic Regulations:

"A **prerequisite** is a level of attainment in public examinations or a course which must be taken and passed before registration for credit in a specified course.

A **co-requisite** is a course which must be taken prior to, or at the same time as, the specified course.

An **exclusion** means you cannot enrol in the course in question if you reached a specified level of attainment in a public exam or if you have taken, or are registered in, a specified HKUST course"

## What are enrichment programs?

SENG offers a number of enrichment programs like exchange, internships, and research opportunities. Details can be found on the SENG website under the "Academics" section.

## How can I find where the classrooms are?

Classrooms in the Academic Building are numbered according to the nearest lifts. Path Advisor is an online map for students to search the nearest lifts and the building floor plan. The Path Advisor App is also available.

## I forgot my ITSC password, what can I do?

You can go to <https://myaccount.ust.hk/passwd/forget> or scan QR code and follow the instruction to reset your ITSC password.



# TIPS FOR FRESHMEN



## HKUST Student

- Check grades
- Book facilities
- View timetables
- Check your student card balance
- e-identity to access facilities



## HKUST Path Advisor

- Find the shortest route to your desired destination



## HKUST iLearn

Includes Canvas, Student Feedback Questionnaire (SFQ) and iPRS

iPRS system:

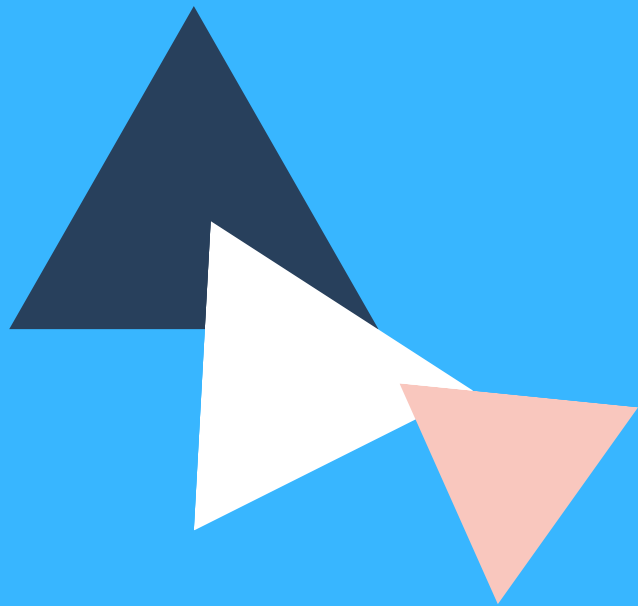
- Interaction in classes
- Show responses and poll results instantly with your participation
- Attendance may be recorded using the system



# CAMPUS MAP







Center for Engineering Education Innovation  
The Hong Kong University of Science and Technology  
(852) 2358 5934/ 2358 5935  
sengadvisor@ust.hk  
<https://e2i.hkust.edu.hk>