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香港科技大學 THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY



ACADEMY OF 跨學科學院 INTERDISCIPLINARY STUDIES

EXPERIENCE WITHOUT BOUNDARIES

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THE AIS DIFFERENCE

HKUST's pioneering Academy of Interdisciplinary Studies (AIS) plays an integral part of the University's well-established tradition for innovative teaching, learning and research. AIS brings together two or more different academic disciplines and offers a brand-new type of educational experience, characterized by select multicultural cohorts, high-powered curricula across different schools, and wide-ranging personal and professional enrichment activities. Why not find out the AIS difference for yourself?

ACADEMY OF 跨學科學院 INTERDISCIPLINARY **STUDIES**

UNDERGRADUATE PROGRAMS



*Jointly offered by the School of Business and Management and the Division of Environment and Sustainability





BEST Faculty-Student Relationship

STRONG Partnership with Industry

AIS has led the way in many ways in Hong Kong and the region:



- to establish an interdisciplinary academic unit at a Hong Kong university
- to create an undergraduate dual degree program integrating technology and business knowledge
- Dual Degree Program in Technology & Management
- to start an undergraduate program nurturing ecologically and economically sound future leaders to embed and advance sustainability - Environmental Management and Technology
- to start and undergraduate program filling the global talent group for top level green and sustainable finance experts - Sustainable and Green Finance
- to introduce a novel academic framework "Major + X" as a new degree option for undergraduates to excel in an extended major of an emerging hot topic such as Artificial Intelligence or Digital Media and Creative Arts, in addition to a traditional major program.



848 27 nationalities



TRUE Interdisciplinary Education and Research

- to offer an undergraduate program that allows students to create their own majors and curricula
- Individualized Interdisciplinary Major

ACTIVATEYOUR POTENTIAL

Undergraduate education at AIS references key trends and global developments through far-sighted combinations of fields that are driving our rapidly evolving world. Close links with business and industry along with a special emphasis on character-building and identification of individual interests add to our empowering student experience.

We understand that an all-round development is more than academic knowledge, personal understanding of motivations and goals, professional know-how and business experience all help students plan for their future and adapt well to the working environment.



Career Advising and Personal Counseling

AIS career advisors support and assist students in understanding themselves and potential career directions throughout their studies. Professional assessment tools may include the Lumina Spark, which provides a unique portrait of who they are, increase self-awareness, reveal hidden potential and cope better under pressure. Career advisors also run individual advising sessions, mock interviews, and CV clinics.



AIS Industrial Fellows

This innovative initiative links AIS students with seasoned executives and entrepreneurs to bridge the transition from graduate to professional and build career and intergenerational insights. AIS Industrial Fellows come from diverse backgrounds, including finance, IT, environmental services, regulatory and legal services and the non-profit sector. They meet with students and share career advice, pathways to success in a particular field, professional knowledge, goals, hopes and dreams.

At AIS, We Care **About Your Future**

Significant career guidance and personal insight opportunities are available to foster students' capabilities to map out their own career path.



Symposiums, Forums and Seminars

Gatherings of different scales are regularly organized for students to learn from successful executives and obtain first-hand accounts of the latest trends and issues from academic and industry leaders.







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The Dual Degree Program in Technology & Management, the first of its kind in Hong Kong, offers high-flying students an inspiring opportunity to gain two internationally-recognized degrees in five years: Bachelor of Engineering (BEng) or Bachelor of Science (BSc), and Bachelor of Business Administration (BBA).

Dual Degree students learn how to analyze issues from technological and business viewpoints and solve both quantitative and qualitative problems. Students also develop awareness of different cultures and global perspectives and foster a willingness to serve, gaining much more than two degrees. With double degrees in technology and management, our graduates have a wide variety of career advancement opportunities.

The Dual Degree Program has equipped me with both essential technical expertise and business skills for our technology-centered world. This joint approach not only offers a competitive advantage, but also gives me an edge in innovation

BEng Options

- 1. BEng in Aerospace Engineering
- 2. BEng in Bioengineering
- 3. BEng in Chemical Engineering
- 4. BEng in Civil and Environmental Engineering
- 5. BEng in Civil Engineering
- 6. BEng in Computer Engineering
- 7. BEng in Computer Science
- 8. BEng in Decision Analytics
- 9. BEng in Electronic Engineering
- 10.BEng in Industrial Engineering & Engineering Management
- 11. BEng in Mechanical Engineering

ENRICHMENT HIGHLIGHTS

1. International Business Plan Competition

A popular international event, co-organized with the University of Illinois at Urbana-Champaign (US), University of Bayreuth (Germany), University of Sao Paulo (Brazil) and other universities. Participants work in multinational teams to develop creative applications and viable business plans for an emerging technology.

		RECENT CONTESTS
	2022-23	• "Al for Business" – Hamburg
	2020-21	• "EdTech for COVID-19" – Hong Kor
	2019-20	"Startup for COVID-19" – Online "Integrating the Disabled" – Sao F
	2018-19	 "Healthier Living for China" – She "Smart Transportation" – San Jos
	2017-18	"Healthy Living for China" – Shangi "3D Printing for Business" – Bayre

2. Corporate Projects

Students solve real-world challenges faced by our corporate sponsors that require the use of advanced technologies and business strategies in the format of consulting, desktop research, or solution prototyping. Past corporate sponsors include Arup, Bayer Japan, Google, Harman, P&G, UBS Zurich/APAC, among many others.

BSc Options

OR

12.BSc in Biotechnology 13.BSc in Integrative Systems & Design

BBA Options

- 1. BBA in Economics
- 2. BBA in Finance
- 3. BBA in General Business Management
- 4. BBA in Global Business
- AND 5. BBA in Management
 - 6. BBA in Marketing

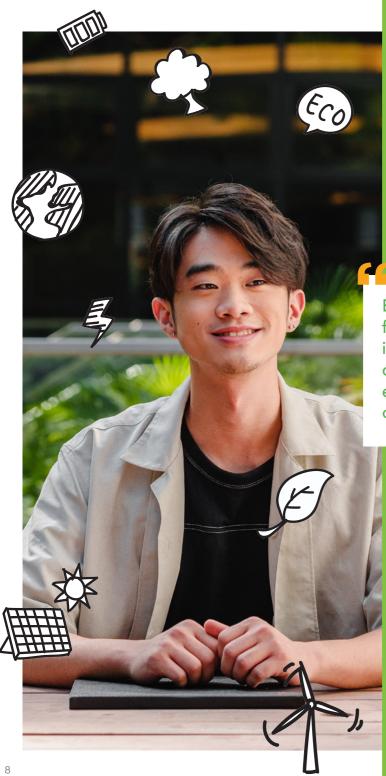
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EVMT offers numerous openings and the freedom to explore and develop your interests and abilities. This dynamic program connects people committed to improving the environment and enables them to create their own pathways to achieve this

> Sustainability and the protection of our environment are among the greatest global concerns of today and tomorrow, with an ever-more pressing need to find a balance between human development and environmental well-being.

The pace-setting **BSc in Environmental Management and Technology** program offers a unique opportunity for motivated students to move ahead in this area, educating a new generation of environmental professionals with cross-disciplinary knowledge to deliver ecologically and economically sound solutions and to take up the role of sustainability managers in corporations in Hong Kong and around the globe. EVMT is accredited by the Hong Kong Institute of Qualified Environmental Professionals (HKIQEP).



1. Capstone Projects

Final-year students work in teams with a corporate partner on a current environmental issue, under the supervision of an experienced manager and engage in environmental decision-making. Corporate partners include AECOM, ARUP, Civic Exchange, CLP, Foodpanda, HSBC, HSH, Link REIT, Swire Properties Limited, and The Green Earth.

2. Visits and Field Trips

A great chance to go on-site in Hong Kong, Mainland China and overseas to see environmental developments up close and learn first-hand from the people involved.



- Food waste recycling system, Hong Kong
- Green building operations, Hong Kong
- Bio resources, Malaysia
- Waste management, Germany, Taipei and Tokyo
- Sustainable city, Seoul and Singapore
- Air pollution, Beijing
- Natural resources and conservation, Jeju
- Clean and renewable energy, Tangshan and Chengde



• Energy Sources and Usage

- Environmental Economics
- Environmental GIS
- Environmental Law

EVMT COURSES

- Environmental Technology for Impact Assessment
- ESG Management and Reporting
- Green Business Strategy
- LCA for Sustainable Development



Business and Commerce Further Studies NGO Environmental Consultancy Others

The Individualized Interdisciplinary Major, currently the first program of its kind in Greater China, offers a non-traditional, cross-School academic pathway for exceptional students with the vision, talents and character to initiate an interdisciplinary major tailor-made to their intellectual interests. Joining this exciting degree program enables those selected to subsequently pursue a novel interdisciplinary research field or a career in an area of emerging significance.



Common Core and fundamental courses	48-49 credits
Major courses planned by student	At least 48 credits
Elective courses planned by student	At least 18 credits
Interdisciplinary Capstone Project	6 credits





The IIM program is a challenging but unique opportunity to study what you are truly interested in and passionate about as, unlike any other major, you have the flexibility to design your own studies



PROGRAM EXAMPLES



Anthropomorphism in Interactive Systems



Art Heritage Digitalization and Curation



- **Behavioral Consumer Science**
- Bionics



Brain Computer Interface

Bioenergy Management



Built Environment Design



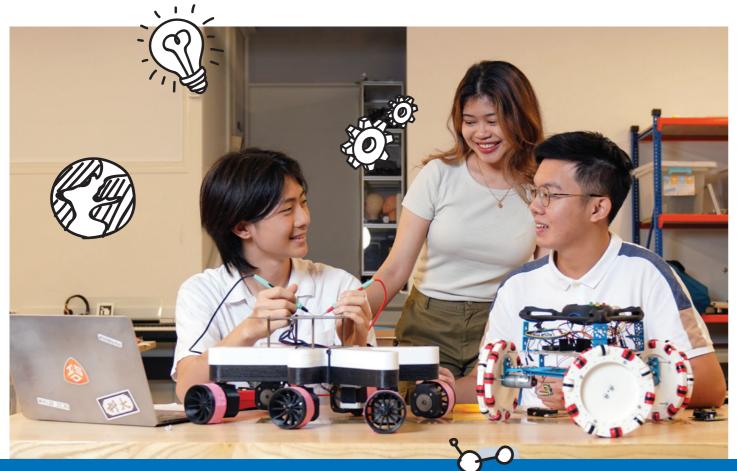
Computational Cognitive Science

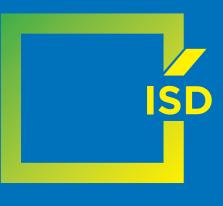


Environmental Geoscience



- Human-Computer Interaction
- **Innovation Management**
- **Medical Engineering**





The BSc in Integrative Systems and Design, the first experiential learning degree program in Hong Kong, is a new paradigm for educating technologists and innovators. A more holistic systems perspective is necessary to truly innovate and tackle the problems of an ever-changing world. ISD uses integrative systems ranging from robotics, smart cities to biomedical systems to advance learning and knowledge through active teaching and transdisciplinary research. Embedding design and system thinking into the curriculum, combined with an emerging pedagogy of project-based active learning, will develop students' technical competency, design thinking, understanding of complex and multi-disciplinary systems, and entrepreneurial spirit.



Year 2-4 Team-Based Year-Long Cornerstone **Design Projects** Advanced Courses: Systems Thinking. Design Thinking, Interaction Design, Graphic Communication. Product

Year 1

etc.

 Elective Courses related to different Integrative Systems Technical Streams e.g. Computer Engineering, Mechanical Engineering and Electronic & Computer Engineering

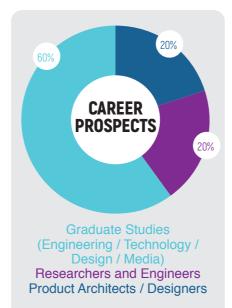
Development, Product Management,

CURRICULUM HIGHLIGHTS

• Fundamental Design Courses:

Strategic Innovations, etc.

Sketching, Digital Design and Rapid Prototyping, Creative Strategies,





1. Chinachem – ISD Talk Series



2. Team-Based Year-Long Cornerstone Design Projects

Starting from Year 2, yearly large-scale theme-based cornerstone projects enable ISD students to practice context-based problem solving while developing individual technical competencies. Industry partners, field experts and potential users participate as co-designers enabling students to experience and practice solving real-world challenges.

One of the projects, titled "Situational Awareness Location Transponder (SALT): A Phase Difference of Arrival (PDOA)-based System for Enhancing Construction Safety", has won the Gold Award of ASMPT Technology Award 2023. SALT is a safety solution for construction sites that uses Bluetooth, Ultra-Wideband (UWB) and Inertial Measurement Units (IMU) sensing technologies to provide real-time positioning and trajectory, reducing accidents that involve heavy machinery and workers.

The Chinachem – ISD Talk Series 2022-23 invited expertise and professionals in industries, who have been dedicated to contribute, embrace and promote sustainability, ranging from daily operations, green construction to carbon neutral Hong Kong, to educate and open up a new dimension for ISD students when developing new ideas. The series aims to bring in contemporary concepts with concrete examples in the real world, broadening student's horizons by introducing new facets of knowledge that brings impact to the society or even the world.





The **BSc in Sustainable and Green Finance** program is at the forefront of undergraduate education in Hong Kong to equip students with interdisciplinary knowledge and skills in both Business & Finance and Environment & Sustainability areas. The program is jointly offered by the School of Business and Management and the Division of Environment and Sustainability, designed for students who would like to pursue a career in the sustainable and green finance industry.



Investing in sustainability has been a global megatrend in recent years driven by the collective effort among governments and businesses around the world to address climate risks. It creates tremendous opportunities in carbon pricing and trading market. sustainability-linked debt market, green financial product development, sustainable supply chain financing, environment, social, and governance (ESG) management and strategy development and so on.

SGFN program nurtures students to be effective leaders in the sustainable and green finance industry. The curriculum overlays business and finance topics with sustainability significance, which covers the latest sustainable and green finance development at national and global levels to provide students with a global perspective in the field with local relevance. Featured courses include:

Business and Finance

- Derivative Securities
- Fixed Income Securities
- ESG Investing
- Green Finance Case Analyses
- Sustainable Supply Chain Management

Environment and Sustainability

- Sustainability Fundamentals
- Circular Economy and Life Cycle Assessment
- Green Business Strategy
- Environmental Sustainability Risks and Challenges
- Governing Green Finance: National and International,
- Perspective and Approaches







ENRICHMENT





1. Speaker Series

Professional from the field are invited to provide ideas of the sustainable and green finance industry to students and share their insights and experience.

2. Networking with Industry

Company visits and industry events are provided for students to have an early connection to the industry and network with industry professionals.







CAREER PROSPECTS

As the raise of awareness in sustainability is driven by policies of jurisdictions and commitment of companies and organizations, sustainable and green finance professionals are highly desirable globally. SGFN graduates will be able to develop careers in different sectors, including investment/retail banking, asset management, corporate finance, risk management, ESG consulting, capable in conducting sustainable investment analyses, ESG analyses, sustainability consulting, sustainable finance product development and so on.







HKUST is the first in Hong Kong to introduce a novel academic framework "Major+X" as a new degree option for undergraduates to excel in an Extended Major of an emerging hot topic such as Artificial Intelligence in addition to a traditional major program. Blending traditional programs with the emerging hot topics, this new degree structure not only offers students with greater flexibility, but also allows timely curriculum adjustment and better integration between existing and new knowledge to meet with the emerging need of the society.

The world is changing fast; technology is evolving faster than ever and shaping the rules and future of our society. Companies and individuals that do not keep up with some of the major tech trends run the risk of being left behind. On top of highly specialized experts, the society needs talents with multidimensional visions and knowledge, who can apply innovative technological skills to solve real-world problems.

To promptly answer the need for **Q** this special breed of graduates in σ^{1} an effective way, we enrich existing Majors with extended study in "X", which is innovative in emerging area of significance recognized for the current need, and could be essential for the future



scientific, engineering, business and social breakthrough.

The Extended Major framework (Major+X) offers an organic study pattern for students from different disciplines to learn solid knowledge from their own Majors PLUS innovative application of "X" in their Major areas. Students need not take a full degree of "X" to learn about emerging technologies.



Currently, we offer two Extended Majors: Artificial Intelligence and Digital Media and Creative Arts.



STUDENTS'



"For me, the most valuable aspect of T&M-DDP is the supportive and tight-knit community. Our faculty members care deeply about students' wellbeing and development. Over the years, they have encouraged me to step out of my comfort zone, explore my creativity and discover my true passion. Corporate-sponsored projects and international exposure opportunities, which are exclusive to T&M-DDP students, have also helped me build strong networks globally in various industries and develop skills for effective cross-cultural collaboration. Finally, I am surrounded by bright and hardworking peers in the community. Many of them have become my lifelong friends, inspiring me to work harder and improve every day."



AKSHAY PRAKASH Class of 2018, T&M-DDP

"The Dual Degree Program at HKUST breaks the traditional barrier students faced in choosing between a STEM major and a business major, by offering a unique program that prepares specialists who are also capable to manage. T&M-DDP prepared me for my role at Goldman Sachs, which requires a balance between technology and finance and gave me advantage over peers who only had one specialisation. I became the project leader by learning to manage financial projections and product simultaneously through T&M-DDP's corporate project competitions. As more and more multinational corporations look for cost efficiency opportunities, being a multitasker ensures your indispensability in the workforce."

DIANA JEONG Class of 2022, EVMT



"It's a humbling experience studying EVMT at HKUST. EVMT is where your drive and determination to address global challenges is embraced and trained thoroughly. You will learn essential leadership skills and develop innovative ideas to make a unit (be it your daily life choices, a business firm, or a country) more sustainable. I'm honored and blessed to be a part of this community that helped me find hope, peace, and even joy amid the pandemic. Truly, it has offered me lasting friendships, knowledge, and strength that shaped me into the person I am today."









KARINA CHOW Class of 2021, EVMT

"Combining different facets of the environment industry, the EVMT program offers **a great pathway to the sustainability field**. I chose the program because I wanted to know a bit of everything: the science, the engineering, and the business behind it all. I knew that I could always build on this foundation when I find an area I want to specialize in afterwards. Indeed, the study was exactly what I had anticipated. It also helped me further understand my strengths and weaknesses, which was important in determining suitable jobs for me."

IRENE CHEUNG

Class of 2024, IIM (Human-Computer Interaction)

"As university students, we all have thought about "I want to change the world", and the IIM program is the best opportunity for trying to achieve that. My tailor-made IIM program is Human-Computer Interaction. I want to design software to help people improve their lives, especially underprivileged and disadvantaged groups. The amount of trust, support and freedom provided by IIM on academic choices and exchange opportunities are incredible and **professors are extremely helpful** with generous feedback and mentoring. Since joining IIM, I have definitely improved greatly not just academically but also personally."





CONNIE CHOW Class of 2023, IIM (Built Environment Design)

"My self-designed major Built Environment Design allows me to focus on the particular goal I want to achieve – enhancing sustainability with greater efficiency. My IIM major includes courses on urban planning, environmental science, system design and engineering, **a combination you can't find anywhere else**, yet essential for my goal. I have been receiving great support from AIS that allows me to absorb knowledge and gain experience in different disciplines via various channels."

NATHAN PAN Class of 2026, SGFN



"Integrating the concept of sustainability into traditional finance, SGFN is the first bachelor's degree program of its kind in Hong Kong. It is my great honor to be part of the first cohort of SGFN students. I chose this program because I am passionate about sustainability and I believe it would be a fantastic idea if I could impact society and our planet through the business world. The program offers a myriad of activities, including company visits and sustainable finance industry events. These industry exposures help better equip myself to **become a professional sustainable finance expert** in the foreseeable future."



EUNIS YEUNG Class of 2026, SGFN

"Following the increased demand for ESG talents across all industries, being the first cohort of SGFN gave me a head start and equipped me with the necessary skills and knowledge to pursue my career in this field. With only 30 intakes per year, our small cohort size enables us to maintain a close bond with our peers and professors. Furthermore, the various speaker series, company visits and professional workshops unique to our program provided me with **valuable experience beyond the classroom**. These opportunities allowed me to gain first hand and practical insights into the industry, which is essential in a field that is continuously evolving."

JIMMY WU Class of 2024, ISD

"Have you ever dreamed of being an inventor and turning your wildest ideas into reality? If yes, ISD is your perfect program. ISD has opened up a world of endless possibilities for me and empowered me to explore my own path and dive deep into the subjects that truly ignite my passion. I've been given the tools, knowledge, and support to bring my inventions to life. The classroom has become our personal lab, where we can tinker, experiment, and turn our ideas into reality. Studying ISD is a journey of self-discovery where imagination knows no limits, and every day is an opportunity to create something extraordinary."

JASMINE LI Class of 2023, ISD

"I always believe the ability to create is the most powerful ability one can possess. In ISD, I am grateful to be given the freedom to branch out in various disciplines and try everything, which prepares us to **become a well-rounded innovator** who can apply the knowledge to solve real-life problems. ISD encourages me to imagine, dream big and attempt without boundaries, as there is no such thing as failure when you are getting your hands dirty and bringing your imaginations to life."











ADMISSION INFORMATION

Admission

AlS offers both School-based and Program-based Admission. We do this to provide flexibility and to cater for two different types of applicants: those who are clear about their academic and career interests and keen to opt for Program-based Admission; and those who would like more time to explore their interests after admission and prefer to choose School-based Admission. The Individualized Interdisciplinary Major Program (IIM) is the only AIS undergraduate program NOT to recruit students through Program-based Admission.

Application via Program-based Admission

Program-based Admission

Prospective students apply for the AIS program they wish to join. Upon successful admission, they enroll in the interdisciplinary program from their first year of study.

Local mainstream secondary school students should apply via the Joint University Programmes Admissions System (JUPAS). Local students with non-HKDSE qualifications and non-local students should apply via Direct Entry Admission. Please go to join.hkust.edu.hk for information about application procedures, admission requirements, and important dates.

Students should apply to one of the following	Successful Admission	Year 1	Year 2	Year 3	Year 4	Year 5
 Programs : Dual Degree Program in Technology & Management (T&M-DDP) 		Dual Degree Program in Technology & Management (T&M-DDP)				
 Environmental Management and Technology Program (EVMT) Integrative Systems and Design Program 			ental Manag Iy Program	gement and (EVMT)		
(ISD)		Integrative	Systems an	d Design Pro	ogram (ISD)	

School-based Admission

Applicants select the School (Science, Engineering, Business and Management, or Humanities and Social Science) they wish to join at HKUST at the admission stage. Visit join.hkust.edu.hk for application details.

Application via School-based Admission





Remarks:

- 1. The Individualized Interdisciplinary Major Program will only admit Year 1 students who have entered HKUST.
- 2. For the admission to the BSc in Sustainable and Green Finance, please refer to sgfn.hkust.edu.hk/admissions.

/ear 2	Year 3	Year 4	Year 5		
Dual Degree Program in Technology & Management T&M-DDP)					
Environmental Management and Technology Program (EVMT)					
ndividualized Interdisciplinary Major Program IIM)					
ntegrative Sys ISD)					

Upon successful admission and the completion of the first year of study at their chosen School, students join the Major Selection Exercise to declare a major within her/his School or an AIS interdisciplinary major. For details of the Major Selection Exercise, please visit

https://ais.hkust.edu.hk/programs/ undergraduate/admission/schoolbased-admission

