



# Master of Science in **Environmental Health and Safety**

Multidisciplinary Training to  
**Environmental Professionals**



## WHY MSc EHS?

The general public, private sectors and government agencies have been increasingly concerned about the impacts of urban development, pollution, climate change on the safety and health of our living environment. The Master of Science program in Environmental Health and Safety is designed to provide multidisciplinary training to current and prospective environmental professionals.

The curriculum covers the scientific, technical, legal and social issues that underpin environmental health practices, food safety, hazards and risks assessment, and occupational health and safety.

Currently, this is the only environment-related MSc program in Hong Kong that focuses on health and safety issues. We aim to educate students with cutting-edge knowledge in environmental health and safety, and equip them with the skills to integrate the knowledge into real-life situations and identify emerging environmental problems.

### Points of Pride



**World class  
faculty**



**State-of-art  
research  
facilities**



**Flexible and  
comprehensive  
curriculum**

## AT A GLANCE

### Program Duration

1 year for full-time; 2 years for part-time

### Study Mode

Full-time or part-time

### Class Hours

Weekday evenings from 6:30pm to 9:20pm; Saturday afternoons.

### Teaching Venue

HKUST Campus, Clear Water Bay, Hong Kong.

### Medium of Instruction

All lectures and teaching materials are in English.

### Course Works

Students are required to complete at least 30 credits of course works, with 12 credits of foundation courses and 18 credits of elective courses. Part-time students may take a maximum of 9 credits each semester.

### Program Fee

For program fees, please scan the QR code below:



### Graduation & Degree

In order to graduate, students must complete 30 credits of course-work and pass all course requirements. In addition, students must attain a graduation grade average (GGA) of 2.850 or higher (out of a scale of 4.30) as required for all postgraduate students at HKUST.

On successful completion of the program, students will receive the "Master of Science in Environmental Health and Safety" degree from HKUST.





# SCHOLARSHIPS AND FINANCIAL ASSISTANCE

## Continuing Education Fund (CEF)

Students who are Hong Kong residents and who have successfully completed the MSc EHS program can apply for a subsidy from the Continuing Education Fund.

## Academic Excellence Scholarship

A merit-based student award will be offered to top-performing students of the graduation class each academic year.

## Entrance Scholarship

A scholarship will be offered to newly admitted student(s) based on outstanding academic background and merit each year.

## Elite Scholarship

A scholarship will be offered to newly admitted part-time student(s) with full-time job related to the industry of the environmental health and safety, based on a selective basis.

# FLEXIBLE AND COMPREHENSIVE CURRICULUM

Foundation Courses (All Required)		
ENVS 5111 Environmental Health	3 credits	This course identifies the potential health hazards in the environment. It also emphasizes on the importance of environmental health for moral, legal and financial reasons. Environmental health systems as well as legislation and public organizations in Hong Kong, China and overseas will also be discussed and compared.
ENVS 5114 Environmental Diseases and Microbiology	3 credits	This course aims to study microorganisms in the natural environment and their potential impacts on human beings. Pesticides, chemicals, radiation, air and water pollution are the manmade hazards that are believed to contribute to human illness. Microorganisms or environmental agents cause airborne and waterborne infectious diseases as well as microbial biodegradation of pollutants will also be discussed.
ENVS 5115 Food Safety Control	3 credits	This course provides up-to-date technology, and industrial practices on food safety control. Several international food standards and food safety management systems (e.g. ISO 22000, HACCP), as well as changes in food safety legislation which coupled with a number of high profile food safety issues will be discussed.
ENVS 5117 Public Health and Hygiene	3 credits	This course offers new perspectives of public health and hygiene, emphasizing on practical aspects of epidemiological investigations and public health managements. Health risk assessment issues in relation to environmental health will also be covered. Students will review the harmful or toxic effects of drugs on human health and environment, and epidemiological studies on both infectious and non-communicable diseases, which will be relevant to students pursuing a career in the public health sector.





ELECTIVE COURSES

Choose Any 6 Courses		
ENVS 5112 Environmental Hazards	3 credits	This course aims to provide in-depth knowledge on the potential effects of environmental hazards on the abiotic and biotic environment through various routes and doses of exposure. Current approaches of managing chemical, biological, physical and mechanical hazards in the environment will be addressed.
ENVS 5113 Marine Ecotoxicology	3 credits	This course introduces the impacts and toxic effects of environmental pollutants on growth, morphology and species richness of marine organisms with emphasis at the population, community and ecosystem level. Concepts and methods to assess the impacts of toxicants in marine organisms and environment will also be discussed.
ENVS 5116 Environmental Impact and Risk Assessment	3 credits	This course introduces the general principles, processes and methodologies of EIA and ERA in different developmental projects locally and globally. Specific socio-economic impacts, environmental law and policy, as well as problems and constraints of EIA and ERA implementation will also be discussed and compared through various case studies from developed and developing countries.
ENVS 5118 Conservation and Sustainable Development	3 credits	This course aims to address the importance of different elements and practices in conserving our biodiversity. It also introduces the concept of sustainable development to meet the future needs and balance the objectives between society, economy and environment. It explores ways of finding solutions to the challenges through the promotion of sustainable development.
ENVS 5119 Pollution Monitoring and Control	3 credits	This course introduces environmental consequences of air, water and noise pollution. It also considers theoretical and practical aspects of the design and execution of pollution monitoring programmes. Major issues related to pollution control, such as pollution types and sources, technological aspects of pollution control, and pollution-related legislation and regulations will be discussed.
ENVS 5120 Occupational Health and Safety	3 credits	This course will cover the recognition, evaluation and control of various physical, chemical, biological and ergonomic hazards encountered in the occupational environment. Emphases will focus on the nature and impact of these hazards, assessment methods and corresponding control measures to ensure protection of workers' health and compliance with regulatory requirements.
ENVS 6111 Environmental Health Research Project	3 or 6 credits	This course enables students to conduct an independent research project in selected areas of environmental health and safety or related topics under the supervision of one or more Faculty members. Students will demonstrate their initiative and intellectual achievement of the investigation through the application of skills and knowledge learnt from the courses. They can develop their abilities to present findings in a precise and coherent manner.

ELECTIVE COURSES OFFERED BY OTHER DEPARTMENTS

EVSM 5220 Advanced Environmental Chemistry	3 credits	The course provides an in-depth coverage of topics on inorganic and organic environmental contaminants, their structures, functions, sources and emissions, distribution, transformation and fate in the environment.
EVSM 5230 Environmental Health and Management	3 credits	The course will give an overview on environmental health and management, including topics on outdoor and indoor environments, workplace environment, water and sewage, food, solid waste, hazardous wastes, vectors and control, radiation, environmental health standards, natural and manmade disasters, risk assessment and management, etc. Each topic will include nature of the issue, known and potential health effects, control and regulatory approaches. More in-depth discussions will be given to occupational health hazards, with emphases on current control methods and technology.
JEVE 5320 Water Quality and Assessment	3 credits	Water quality standards, chemical, physical and biological contaminants in water. General laboratory measurements and instrumental analysis based on optical, electrical and chromatography methods. Toxicity and BOD tests. Pathogenic micro-organisms and microbial examination of water. Environment sampling and quality control and assurance.
JEVE 5420 Biological Waste Treatment and Management	3 credits	Principles of secondary, biological treatment processes, including sewage sand filters, trickling filters, activated sludge plants, lagoons, ponds, rotating biological contactors, aerobic and anaerobic digesters, and biological nutrient removal. Management of waste treatment systems and works.
JEVE 5440 Hazardous Waste Management	3 credits	This course aims to provide students with necessary management concepts and skills in addressing the burgeoning intricate problems of hazardous waste created by the rapid urban development. Hazardous waste characterization will be discussed in terms of toxicology and standard test methods. Necessary regulations and legal framework on hazardous waste storage, import / export, transport and disposal / treatment will be covered. The contingency plan for accidental hazardous waste release and the associated remediation methods will be presented. Local and overseas case studies will be discussed as practical examples of the cradle-to-grave hazardous waste management.
JEVE 5530 Environmental Management and Regulatory Compliance	3 credits	The course aims at teaching students the principles of corporate sustainability and environmental management as well as the major environmental laws and good compliance practices in Hong Kong. The course consists of: Part I on Environmental Management covering essential topics including environmental management for sustainability, corporate environmental challenges and governance, ESG reporting, environmental and energy management systems; and Part II on Regulatory Compliance covering major environmental laws and compliance practices in Hong Kong.

\*Course offering of elective courses may vary each year.

# ALUMNI SHARING



## CHOW Chun Sing, Edward

Entrance Scholarship Awardee

MSc in Environmental Health and Safety (EHS) Academic Scholarship Awardee

**Quality Assurance Officer, Gourmet House Limited**

“ I chose this program for further study after completing my undergraduate studies as this program is the only master's program in Hong Kong that focuses on health and safety issues in different aspects, like food safety and occupational safety. Therefore, completing this program enables me to have a wider range of career options. Also, the curriculum of this program is flexible and comprehensive which covers different environmental aspects. We can therefore choose the courses which we are truly interested in. On top of that, students studying in EHS are from diverse academic background and career path – most of them are full-time master students with science or engineering background, and several part-time students are working in related industry while studying. Therefore, I get to know many experts and professionals of the field.



## POON Chung Yan, Kitty

**PhD student, HKUST**

“ The EHS program offers me a truly inspiring 1-year learning experience. The program has not only equipped me with a variety of health and environmental related science disciplines, but more importantly, the competence to analyse problems thoroughly and learn quickly. These skills are helpful and important for my coming PhD study and future career.

EHS is a supportive and warm community where you can always get guidance and inspiration from professors and professionals in related sectors. You can definitely explore different academic interests and career throughout the study of the EHS program. I am grateful to be part of the EHS family.



## LI Ha Wai

Targeted Taught Postgraduate Programmes Fellowships Scheme Awardee

**Project Manager, Hong Kong Waste Association**

“ The program provides a comprehensive understanding of environmental knowledge, including theoretical concepts and practical skills, from basic principles to in-depth discussions. The availability of diverse elective courses enabled me to achieve my learning goals.

Being a part-time student, I initially had concerns about balancing work and studies. However, I soon realized that my worries were unfounded. The 2-year program is well-designed and proved to be appropriate, and I am grateful for the prompt support provided by the EHS department that gave me an excellent learning experience at HKUST.



## ZHANG Shuting

**Engineering Consultant, Guangdong Guangzi International, Engineering Investment Consultants Co., Ltd.**

“ This program allows me to gain invaluable knowledge from professors who used real-life examples as part of their teaching. In the past year, the EHS program conducts many field trips for us, such as conserve parks and treatment plants in HK and Guangdong to broaden our horizon. Also, our professors invited officers and consultants from the government organizations and well-known enterprises to give lectures about the international laws and regulations on environmental protection, health and safety which definitely gave me invaluable insights and help me in my future career.



## TSE Chi Kin, William

Targeted Taught Postgraduate Programmes Fellowships Scheme Awardee

**Environmental Health and Safety Consultant**

“ The program curriculum covers a wide range of subjects that are interconnected and provide a holistic understanding of environmental issues. From ecology to microbiology, from food science to chemistry, the flexible and comprehensive curriculum broadened my perspective and enabled me to see the environment through different lenses. It enhanced my knowledge and prepared me to tackle complex environmental challenges from diverse angles.

As an environmental health and safety consultant, the program's emphasis on practical experience has been particularly beneficial to my career growth. By actively engaging in research projects and participating in field trips, I was able to directly apply the knowledge gained to my current role, effectively addressing environmental issues and ensuring the well-being of individuals and the community.

This program's practical approach has not only expanded my professional capabilities but has also equipped me with the confidence and expertise to navigate diverse environmental challenges. The unique combination of theoretical knowledge and practical application has been instrumental in shaping my career trajectory and enabling me to make a meaningful difference in the field of environmental health and safety.



## LI Feifan

**Research Assistant, HKUST**

“ One of my favorite parts of the EHS program was its strong emphasis on practical experience. Engaging in research projects, attending guest lectures, and participating in field trips inspired me to apply what I learned in class to real-world scenarios and deepened my passion for my chosen career path.

Whether you are a recent college graduate or already working in an environment-related field, this program offers an amazing experience. You will gain knowledge, forge friendships, receive guidance in career planning, and have a unique opportunity to explore Hong Kong.





## ADMISSION REQUIREMENTS

### General Requirements

Applicants to the Master of Science in Environmental Health and Safety Program must hold a Bachelor's degree in Life Science, Chemistry, Environmental Science or a related field from a recognized university or approved institution, with honors not lower than the second class or with an overall GPA not less than 70%.

Applicants who have professional experience or related work experience may also be considered on an individual basis.

### Language Requirements

English is the medium of instruction at HKUST.

Applicants whose first language is not English and whose degree or equivalent qualification was awarded by an institution with the medium of instruction was not English will need to meet the English Language Requirements as follows:

- Test of English as a Foreign Language (TOEFL) – a paper-based test score of no less than 550; or an internet-based test score of no less than 80; or
- International English Language Testing System (IELTS) – an overall score of 6.5 with no sub-score lower than 5.5.

### Admission Procedures and Timetable

Submit application online through HKUST Online Admissions System. Early application is highly encouraged as qualified applicants may be admitted before application deadline. Applicants will be considered on a first-come-first-served basis until all places are filled.

Non-local applicants are advised to apply as early as possible to allow sufficient time for student visa application, personal preparation, and arrival at Hong Kong.

### Application Timetable

SEP	Online application starts
JUN	Deadline for non-local applicants
JUL	Deadline for local applicants

## PLANNING YOUR FUTURE CAREER

### Government agencies

- Agriculture, Fisheries and Conservation Department (AFCD)
- Environmental Protection Department (EPD)
- Department of Health (DH)

### Non-governmental organizations (NGOs)

### Environmental related private companies

### Pursue further study

- MPhil, PhD

### Pursue further study

- Teacher or Laboratory research assistant







THE HONG KONG  
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