01
Emerging Environmental Technologies
Utilize modern technology to solve environmental problems and energy issues

02
Integrated Energy Controlling System
Renewable Energy System and IoT in Energy Management

03
Machine Learning Skills
Use big data analytics to predict potential environmental and energy issues

6 majors Knowledge and Skills

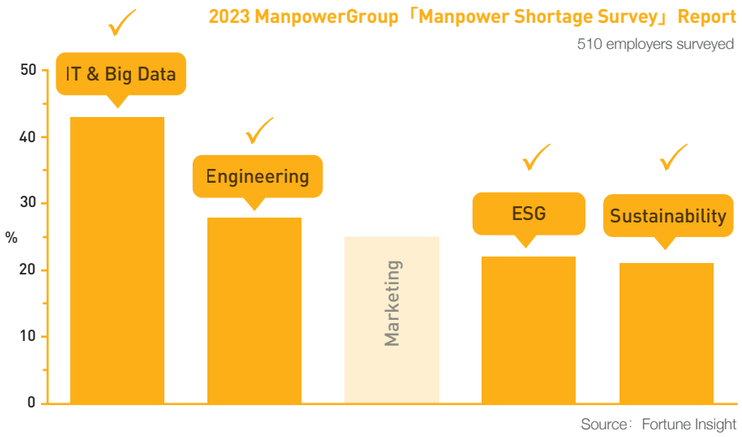
04
Smart Environmental Monitoring and Environmental Modelling Technology
Smart Environmental Monitoring and Geographical Information System

05
Green Building
BIM technology

06
Environmental, Social and Governance
Sustainability practices and corporate social responsibility

Programme nurturing 4 most required talents in the workplace.

2023 ManpowerGroup「Manpower Shortage Survey」Report
510 employers surveyed



Source: Fortune Insight

CAREER PROSPECTS

Graduates may be employed as assistant environmental engineers/consultants/officers, graduate trainees, carbon auditors, assistant sustainability officers, assistant ESG officers, environmental data scientists/analysts, project managers in government departments (such as Environmental Protection Department), technology development associate in public and private utilities (such as railway, electric and gas companies), project manager (consultancies), facility manager, (facilities and building management companies, waste treatment and recycling management service providers, non-government organisations and private corporations).

Bachelor of Science (Honours) in Green Engineering and Sustainability
PROGRAMME COMPLETION

Relevant Master Degree
CONTINUING EDUCATION

Hong Kong Registered Professional Engineer (Environment)
HKIE accredited (Provisional)
WORKING EXPERIENCE

: 2173 1950 / : thei-dcee@thei.edu.hk / : https://www.thei.edu.hk

高科院 Thei

DEPARTMENT OF CONSTRUCTION, ENVIRONMENT & ENGINEERING
建造、環境及工程學系

Bachelor of Science (Honours) in Green Engineering and Sustainability
綠色工程與可持續發展(榮譽)理學士

YEAR 1 ENTRY
SELF-FINANCING
ST125206

YEAR 3 ENTRY
SELF-FINANCING
ST125206 (Full-time)
ST525206 (Part-time)

2026-27

PROGRAMME HIGHLIGHTS

- Provides students with knowledge in green technologies (environmental engineering-focused), sustainability and IT skills in response to the Government's initiative on climate action plan, environmental protection, waste management and smart city development.
- Equips students with professional knowledge and skills to pursue careers and to assume leadership roles to serve the manpower needs of the environmental industry and ESG.
- Featuring with both scientific knowledge and practical skills in pollution control (air, water, noise and environmental impact assessment) and big data analytics and their applications in environmental and energy industry.
- Includes up to 720 hours of Work-Integrated Learning and students can be "work-ready" upon graduation.
- Provisionally accredited by HKIE (Environmental) and will pursue HKIQEP accreditation in the AY25/26.

Four major development in response to Government Initiatives

- CLIMATE ACTION PLAN
- ENVIRONMENTAL PROTECTION
- SUSTAINABLE DEVELOPMENT
- SMART CITY

*A subsidy of up to HK$35,120 per academic year will be provided to students admitted to an undergraduate programme under the Non-means-tested Subsidy Scheme (NMTSS).
+Eligible students can also apply for the On-the-job Training Allowance Pilot Scheme, with a maximum cumulative allowance of HK$90,000.

WORK READY 貫徹應科 READY

For year-3 online application:
VTC Web-based Admissions System
www.vtc.edu.hk/admission

資歷架構 Qualifications Framework
This programme is recognised under the QF (Level 5)
QR Registration No. : 23/000262/L5
Registration Validity Period: 01/09/2023 To 31/08/2028

Industry Endorsement

"According to ManpowerGroup's 2023 "Talent Shortage Survey" report, among the 500 employers interviewed, the top five skill shortages are **information technology and data** (43%); **engineering technology** (28%); sales and marketing (25%) ; risk management and information on **ESG** (22%); and **sustainability and environment-related skills** (21%). The design of this interdisciplinary course is precisely aimed for this purpose. After graduation, students will have dual skills in engineering and information technology, and will be more favored by major companies in Hong Kong."

Ir Dr Anthony TO See Yuen
CEO, SciCorp (China) Co, Ltd

"This program is highly practical and equips graduates with advanced, innovative knowledge and skills to become environmentalists. The Hong Kong Institute of Environmentalists is a key work-integrated learning (WIL) platform for developing young environmentalists in the fields of environmental protection, conservation, and sustainability. Many local and international companies are seeking competent environmentalists for their projects and services. Due to the high demand for professionals in carbon calculation, auditing, and trading, the Hong Kong Institute of Environmentalists and the Hong Kong Institution of Engineers (Gas and Energy Division) have developed a professional carbon trader program for the Greater Bay Area. Graduates of the program are well-prepared to plan their professional careers and become Registered Environmentalists in Hong Kong."

Dr Tommy HO
Founder of the HKIOE

"In response to global emission reduction policies, the government has invested heavily in the development of **zero-carbon technologies** and applications in recent years. Green engineering refers to the application of modern technologies, such as clean production and information technology, to continuously improve and optimize the ecological environment, **achieve carbon neutrality**, and enable the harmonious development of man and nature. The advantage of this course is that it combines the knowledge of environmental engineering technology, sustainable development, information technology and big data analysis, so that students can understand how to use big data to contribute to Hong Kong's emission reduction."

Ir Kelvin TANG Sher Kin
Executive Director and General Manager
Luen Fat Air Condition (Holding) Trading & Engineering Co, Ltd

"The practical nature of THEi's Green Engineering Programme is highly targeted and focusing on **hands-on ability**. The enterprises and schools, **practical skills** and theoretical knowledge are closely integrated, and the talents and expertise of the students being trained closely matched with the employers' needs in Hong Kong. The students have mastered certain practical work skills before graduation and the design of each modules closely revolves around the employment needs of enterprises, which enhances social practicability and saves investment in educational resources. I strongly recommend this Programme to those youth who want to contribute to the environment and carbon reduction in Hong Kong."

Ir Rocky LAU Hoi Fung
Head of Building Solutions, EnerRight Intelligent Limited

PROGRAMME CURRICULUM

YEAR 1

- Mathematics for Green Engineering
- Introduction to Environmental Technology
- Database Principle
- Nature Conservation and Ecology
- Smart Environmental Monitoring
- BIM & VR Applications
- Introduction to Programming
- GE Core Module : Creativity & Innovation Society
- GE Core Module : Chinese 1
- GE Core Module : English for Academic Studies 1

YEAR 2

- Air & Water Quality & Acoustical Engineering
- Carbon Audit & Life Cycle Assessment
- Geographic Information System
- Project Management
- Environmental Process Modelling
- Recycling Technology and Waste Management with Photogrammetry
- Research Methods and Statistics
- GE Core Module :Entrepreneurial Mindset
- GE Core Module :Technology, Society & Work
- GE Elective Module 1

YEAR 3

- Sustainability and Corporate Social Responsibility
- Green Engineering Laboratory
- Renewable Energy Systems
- Energy Engineering & Conservation
- Machine Learning
- GE Core Module : Chinese 2
- GE Core Module : English for Academic Studies 2
- GE Core Module : English for Professional Purposes
- GE Elective Module 2
- Programme Elective 1

YEAR 4

- Environmental Impact Assessment
- Machine Learning for Environmental Applications
- IoT in Energy Management
- Final Year Project 1 & 2
- Work-Integrated-Learning (WIL)
- GE Elective Module 3
- GE Elective Module 4
- Programme Elective 2

Supporting Industrial Partners (In alphabetical order)

- Acumen Environmental Engineering & Technologies Company Limited
- AECOM Asia Company Limited
- ATAL Engineering Group
- Build King Holdings Limited
- Castco Testing Centre Limited
- China Civil Engineering Construction Corporation
- China Railway Engineering (Hong Kong) Limited
- China State Company Limited
- Chun Wo Construction Holdings Company Limited
- Cinotech Consultants Limited
- Gammon Construction Limited
- Hilti (Hong Kong) Limited
- HKIOE Hong Kong Institute of Environmentalists
- Swire Waste Management Limited
- Yau Lee Holdings Limited
- Yee Hop Engineering Co. Ltd
- 北京城建集团有限责任公司
- 中国国家铁路集团有限公司

100% Work Placement Training

Students will be offered up to 720 WIL hours in green engineering related companies.

1. Work-Integrated-Learning at Multinational and Local Companies in the Greater Bay Area
2. Participate in Government Collaboration Projects with Intensive Laboratory / Hands-on Training
3. Good Connection with Industrial Partners Supervise Student Final Year Projects

On-the-Job Training Allowance Pilot Scheme

Studentwho is studying this Green Engineering and Sustainability degree Programme and is employed by a construction field company at the same time; and also the duration of on-the-job training is not less than 36 working days in a 3-month period is eligible for applying this scheme. The maximum cumulative amount of on-the-job training allowance disbursed to a registered student is hK$90,000.

Maximum Subsidy HK$ 90,000

First Year HK$ 2,000/month

Second Year HK$ 2,500/month

Third Year HK$ 3,000/month