



MASTER OF SCIENCE PROGRAM IN

Digital and Sustainable Cities (55)





Civil and Structural Engineering

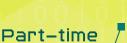
QS World University Rankings 2025 by Subject

MASTER OF SCIENCE PROGRAM IN DIGITAL AND SUSTAINABLE CITIES (DISC)

The Master of Science program in Digital and Sustainable Cities (DISC) is designed to equip students with cutting-edge knowledge and applications of emerging technologies in civil engineering such as **3D printing, digital twins, GIS, satellite remote sensing, cloud computing, construction robotics and modular integrated construction (MiC)** as well as their future trends, in response to the growing demand in the industry for professionals skilled in digital technology, data science and sustainable urban infrastructure management.

Our program integrates digital technologies and sustainable urban design applications, which are essential for data-driven analysis for large-scale civil engineering and construction applications, preparing engineers to tackle any complex challenges they may face as they join local or worldwide efforts to innovate in smart city development, infrastructure, and construction industries.





Normative Program Duration:

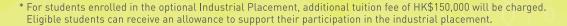
1-2 years

2-2.5 years

Program Fee (2026/27 Intake):

HK\$270,000*

HK\$230,000





Curriculum





Required Courses?

24 credits



MSc Project Compulsory

6 credits

COURSE LIST

i. Digital Technology and **Data Science Courses**

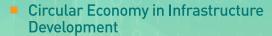


(at least 2 courses)

- Autonomous Construction and Robotics
- Digital Twins for Engineering Systems and Smart Cities
- Geospatial Data Analytics for Urban Infrastructure Planning
- High-Performance Computing for Geotechnical Engineering
- Remote Sensing and Smart Sensor **Networks**







- Computer Methods for Structural **Engineering**
- Computer Vision for Structural Health Monitoring
- Game-Theoretic Models for Smart Urban Infrastructure Systems
- Low Altitude Economy in Sustainable Cities
- Smart Transportation Planning
- Sustainable Construction Materials
- Sustainable Design, Planning, and Operation for Net-Zero City



*Subject to approval, students may take a maximum of 9 credits from the designated non-DISC postgraduate courses.



Industrial Placement

credits Optional



Employability

THE Global Employability University Ranking 2025

In Hong Kong

#3 in Greater China

Full-time students are strongly encouraged to opt for the 1-year full-time Industrial Placement regionally or internationally, which they will have the opportunity to develop their technical and soft skills while building a professional network at multinational corporations or professional firms.





Admission and Requirements

Applicants must possess a bachelor's degree in Civil Engineering or a related engineering field with second-class honors or higher, or an equivalent qualification from a recognized university or tertiary institution.

English proof (TOEFL or IELTS) is required for applicants from universities where English is not the medium of Instruction

For admission details and procedures, please refer to **HKUST Fok Ying Tung Graduate School**



Career Prospect

The construction, infrastructure, and urban development sectors are rapidly adopting advanced digital technologies to drive smart city initiatives, sustainable growth, low altitude economy, operation and management of facilities.



The program's focus on digital innovation, data science, and sustainability directly addresses these gaps, preparing graduates for roles such as smart civil engineers, sustainability managers, urban planners, GIS specialists, R&D engineers, and project managers in automated construction. This ensures that graduates are not only highly sought-after but also positioned to lead and innovate in sectors critical to the future of urban infrastructure and smart city development.

Engineering

THE World University Rankings 2025 by Subject

in Hong Kong #5 in Greater China #8 in Asia











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