Digital Construction

資歷架構 Qualifications Framework

QF Level: 3 QR Registration No.: 22/000405/L3 Registration Validity Period: 01/09/2022 - 31/08/2026

Course Features

Course Aims

This course aims to provide senior secondary students with knowledge of the latest development and achievements in construction technology and apply the basic principles and techniques of construction technology to formulate solutions. It also aims to help students better prepare themselves for further studies and/or career opportunities in related industries.

Diversified Learning and Teaching Activities

Activities such as case studies, projects, software simulation workshops, professional talks and sharing, visits to construction-related facilities, etc. will be arranged.

Simulated Learning Environment

Equipped with industry-standard facilities and equipment, e.g. Construction Project Studio, Construction Laboratory, Building Information Modelling (BIM) & Geographic Information System (GIS) Centre for students to practise related knowledge and skills.

Professional Recognition

Students will obtain a Qualifications Framework (QF) Level 3 certificate in addition to HKDSE qualification upon successful completion of the course.

Learning Modules

1. Understanding Construction Industry (36 hours)

- Overview of construction industry
  - Types of construction works
  - Key parties in construction projects
  - Skills of construction trades

2. Introduction to Construction Technology (36 hours)

- Construction innovation and technology
- Innovative construction methods and technology
  - Modular Integrated Construction (MiC)
  - Design for Manufacture and Assembly (DfMA)
  - Digital Works Supervision System (DWSS)
- Automation in construction
  - Concept and implementation of automation in construction
  - Application of AI and robotics in construction

3. Application of Construction Software and Equipment (48 hours)

- Application of construction software and equipment
  - Application of Building Information Modelling (BIM)
  - Application of Small Unmanned Aircraft (SUA) in construction
  - Application of 3D printing in construction

4. Construction Technology Project (60 hours)

- Project brief and scenario
- Construction project planning
- Construction project schedule
- Resources allocation
- Formulation of technology solutions
- Evaluation and implementation
- Report writing

Ir Cr Tony ZA Wai Gin, Deputy Head of Contracts Division, Hip Hing Construction Co., Ltd.

"No country or society today would succeed without the adoption of engineering at some level. Engineering and engineers have had an enormous impact on every aspect of our modern lives. The importance of engineers to any society has historically been of great importance, and that trend is only likely to increase over time. As our world becomes rapidly more technology dependent, the reliance on good technology will make Engineers increasingly important. This ApL course introduces general profile of the construction industry and construction technology, and its latest local and global development, and nurtures students' sense in work ethics and responsibilities, occupational safety as well as sustainable development applications. Through communication, coordination and teamwork during the learning process, students will be able to explore the relationship between construction technology and civil engineering from multiple perspectives. Students will also be better equipped in the field of engineering and get new inspirations on smart city."

Articulation Pathways

Further Studies

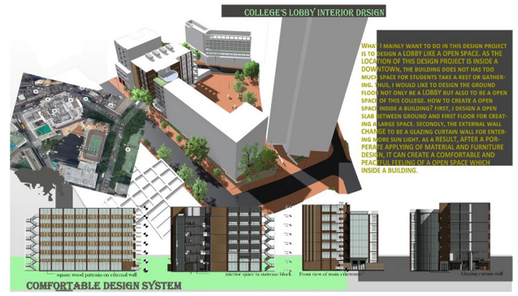
Courses related to architectural technology and design, architecture and interior design, surveying, civil engineering, building management, building services engineering, property and facilities management, environmental engineering, electrical and mechanical services engineering, building automation engineering etc. For example, there are some related courses offered by the Technological and Higher Education Institute of Hong Kong (THEi) / the Hong Kong Institute of Vocational Education (IVE) :

- Bachelor of Engineering (Honours) in Civil Engineering
- Bachelor of Science (Honours) in Surveying
- Higher Diploma in Civil Engineering
- Higher Diploma in Surveying
- Higher Diploma in Building Studies

Students who have successfully completed this ApL course and meet the exemption criteria of Diploma of Vocational Education (Construction Technology) are eligible for a 26-hour module exemption.

Employment

Careers in the fields of construction such as architectural technicians, BIM technicians, interior designers, building inspectors, surveying officers, project coordinators, facilities management officers, property management officers, building services engineering officers, etc.



Class Arrangement

Mode 1
(Lessons will also be scheduled during summer holidays.)

Every Saturday 09:00 – 12:00 OR
Every Saturday 14:00 – 17:00

Venue

- IVE (Tuen Mun)
  18 Tsing Wun Road, Tuen Mun, N.T. OR
- IVE (Tsing Yi)
  20 Tsing Yi Road, Tsing Yi Island, N.T.

Remark: Final class venue/ time may be subject to change with respect to the confirmed number of enrolment and other special circumstances.

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Mode 2

Subject to mutual agreement between the school and