

# Electrical and Energy Engineering

QF Level: 3 QR Registration No.: 17/000845/L3 Registration Validity Period: 01/01/2018 - 31/08/2021

## Course Features

### Course Aims

Through a simulated environment, students will learn the general profile of the electrical and energy engineering industry, and its latest local and global development. They will understand the work ethics and responsibilities, safety as well as the applications of sustainable development technologies through interactive learning activities.

### Internship Scheme

Upon completion of the course, outstanding graduates may be invited to participate in the Summer Internship Scheme offered by the CLP Power Hong Kong Limited and will be able to gain practical experience with the theories learnt in the workplace environment.

## Learning Modules

### 1. Overview of Electrical and Energy Engineering (36 hours)

- Industry profile
- Overview of electricity ordinance (Chapter 406)
- Utilisation of electrical energy in daily life
- Fundamental electrical engineering principles

### 2. Utilisation of Electrical Energy (72 hours)

- Fundamental electronic principles
- Electrical energy in control
- Electricity supply system and tariff
- Local and global trend of power industry and market
- Electricity ordinance on REW/REC and WR1/WR2
- Basic electrical installation and occupational safety

### 3. Energy Resources and Efficiency (72 hours)

- Natural energy resources
- Economic dispatch
- Concept of energy audit
- Smart technologies to enhance energy efficiency
- Implementation Project (Choose one elective topic)
  - (1) Renewable Energy System
  - (2) Smart Technologies and Energy Efficiency

### Diversified Learning and Teaching Activities

There will be lectures with demonstrations, group discussions and presentations, experiments, case studies, visits to power company facilities relating to power generation and energy efficiency, practical training, project learning, etc.

### Professional Recognition

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



Mr. TK Chiang, Managing Director, CLP Power Hong Kong Limited

While the world witnesses rapid scientific and technological advancement, promotion of STEM (Science, Technology, Engineering and Mathematics) education has become a worldwide trend to equip students with the right mind set and abilities to meet changes and challenges, and helps to foster the development of Hong Kong.

Aligning our talent development direction with this trend of the time, this Applied Learning course jointly organised by CLP and VTC is oriented to deepen students' knowledge of electrical engineering and familiarise them with industry practices through a variety of activities, including project learning, experiments and industrial visits. The course emphasises the importance of both theories and practice, and covers the latest technologies in the power industry, such as smart grid and renewable energy. Internship and career opportunities are also available to outstanding students. Some of the graduates of this course have joined the CLP family. The course is an excellent choice for students who are interested in pursuing a career in the engineering profession.

## Articulation Pathways

### Further Studies

Courses related to electrical engineering, electronics engineering, building services engineering, mechanical engineering, environmental protection and management, environmental engineering and energy management, etc. For example, there are several related courses offered by the Hong Kong Institute of Vocational Education (IVE) / the Technological and Higher Education Institute of Hong Kong (THEi):

- Higher Diploma in Electrical Engineering
- Higher Diploma in Building Services Engineering
- Higher Diploma in Mechanical Engineering
- Higher Diploma in Environmental Engineering
- Bachelor of Engineering (Honours) in Building Services Engineering



### Employment

Careers in the fields of energy engineering, electrical engineering, building services engineering, environmental engineering and energy management.

## Class Arrangement

### Mode 1

Every Saturday 13:30 – 16:30 / 17:30,  
3 or 4 hours per lesson

### Venue:

- IVE (Haking Wong)  
702 Lai Chi Kok Road, Cheung Sha Wan, Kowloon

Remarks: 1. Technical visits and / or guest lectures may be arranged in the morning.

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

### Mode 2

Subject to mutual agreement between the school and the VTC.

## Selection Arrangement

Students are required to attend a group interview. Selection is based on student's interest towards the industry, aptitude, communication and language skills.

## Course Fee

\$14,500 (Course fee is fully subsidised by the EDB.)