

# Dual Master's Degree Programme

(Future Energy and Power System Smart Operation and Management)



香港科技大學  
THE HONG KONG  
UNIVERSITY OF SCIENCE  
AND TECHNOLOGY

CLP Power Academy  
中電學院



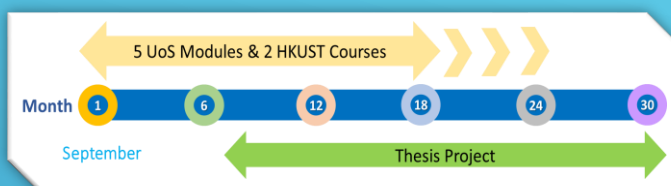
University of  
**Strathclyde**  
Glasgow



## The programme features:

- 2.5 year part-time programme
- Online distance learning + taught modules
- 5 Strathclyde (UoS) modules + 2 HKUST courses
- Industry-based thesis project by applying state-of-the-art technologies such as big data analytics, IoT technology and AI to areas related to power system smart operation and management, including electrical, mechanical, power, energy and environmental engineering, etc
- Guidance from both academic advisors and industry mentors for thesis project
- Network building with industry practitioners

**Application : Available NOW !**



**Please visit:**

<https://dualmsc.seng.ust.hk/>



## Entrance requirement:

- A first or second class Bachelor's degree in a relevant engineering (electronic, electrical, mechanical, energy, power, environmental or systems engineering) or physical sciences subject (mathematics, physics, computer science), from a recognised academic institution. Other academic subjects may be considered on a case-by-case basis
- Reach an appropriate level of English language proficiency (including reading, writing, speaking and listening). At HKUST and Strathclyde, IELTS (Academic) requirements are: 6.5 overall (no individual band less than 5.5)

## Tuition fee:

- Students are required to pay the tuition fee of approximate HK\$300,000 per programme for 2022/23 admission and miscellaneous student fees as required

## Topics of modules/courses (subject to change):

### Strathclyde modules

(2 core, 2 optional, and 1 professional practice):

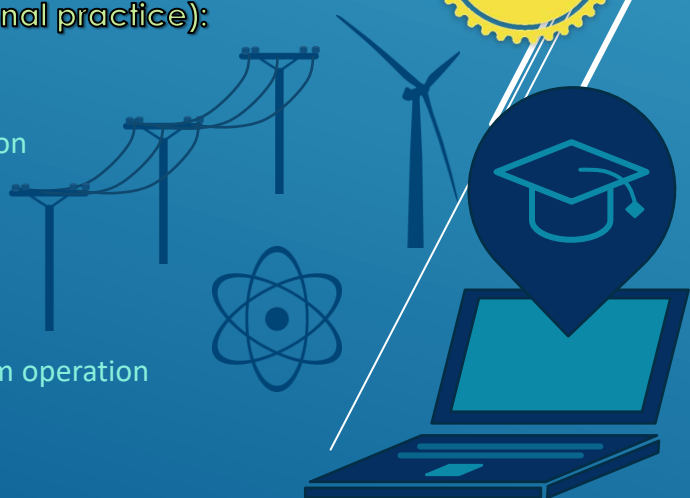
#### Core modules:

- Key power systems concepts and foundations
- Power system operation, control and protection

#### Optional modules (2 from 6):

- Power electronics conversion and control
- Communications and the smart grid
- Renewable energy systems
- Managing risk and uncertainty in power system operation
- Asset management and condition monitoring
- Power utility management – business module

#### Professional practice module



# HKUST courses

(choose 2 courses\* related to the topic of the thesis project):

## Research areas: Big data analytics, artificial intelligence

### Example of courses:

- COMP 5312 Introduction to Big Data
- COMP 5211 Advanced Artificial Intelligence
- COMP 6211 Advanced Topics in Artificial Intelligence
- MSBD 5003 Big Data Computing

## Research areas: Internet of things, power control

### Example of courses:

- COMP 5211 Advanced Artificial Intelligence
- ELEC 5650 Introduction to Networked Sensing, Estimation and Control
- IBTM 5060 Building Internet of Things: Technologies, Big Data and Strategies for the Building Manager

## Research areas: Renewable energy sources and sustainability, energy policies

### Example of courses:

- MECH 5230 Computational Fluid Dynamics and Heat Transfer
- MECH 5430 Thermodynamics and Kinetics of Materials

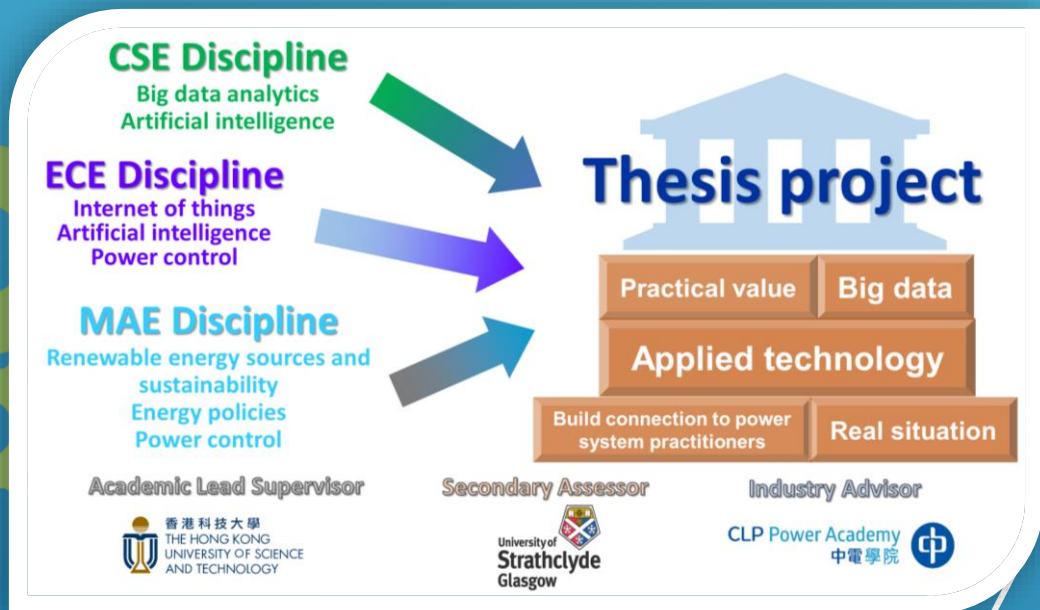
\*Remark: The offering schedule of specific courses will be confirmed shortly before the beginning of each academic term.



## Thesis Project

# AI

# BIG Data



## Graduation:

- Upon successful completion of the thesis project and passing of all modules/courses, graduates will be awarded both a Master of Philosophy degree from the HKUST and a Master of Science degree from the University of Strathclyde.
- Graduate separately in Hong Kong and Glasgow

