

# Dual Master's Degree Programme

(Future Electrical Power System Operation and Management)



CLP Power Academy  
中電學院

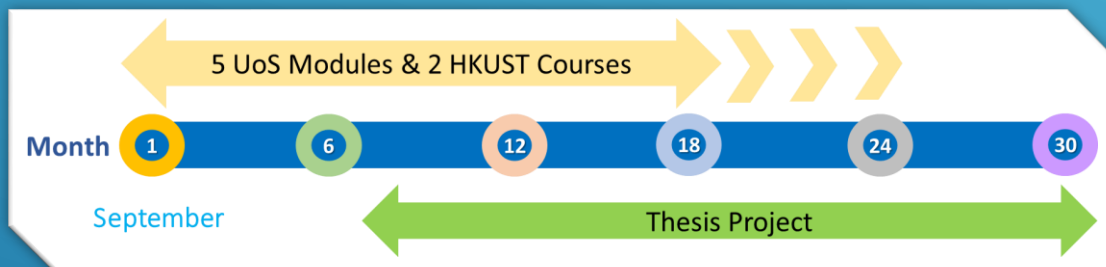


## The programme (learning mode and entrance requirements):

- Combined classroom-based (HKUST) and distance/online plus intensive classroom-based (UoS) taught modules
- Entrance requirements – a suitable first (Bachelor's) degree in an appropriate subject from a recognised institution, and English (writing, reading, speaking and listening) abilities

## Structure and timeline:

- 30-month programme (Hong Kong based)
- 7 modules/courses in the first 18 months (or 24 months max.) of the programme
- Each module/course may have mid-term assignment (or test) plus a final examination, among other assessment methods such as in-class presentation
- 24-month thesis projects start after the first 6 months



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

### UoS 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
- Regulation and market structures
- Managing risk and uncertainty in power system operation
- Asset management and condition monitoring
- A relevant business module relating to power utility management

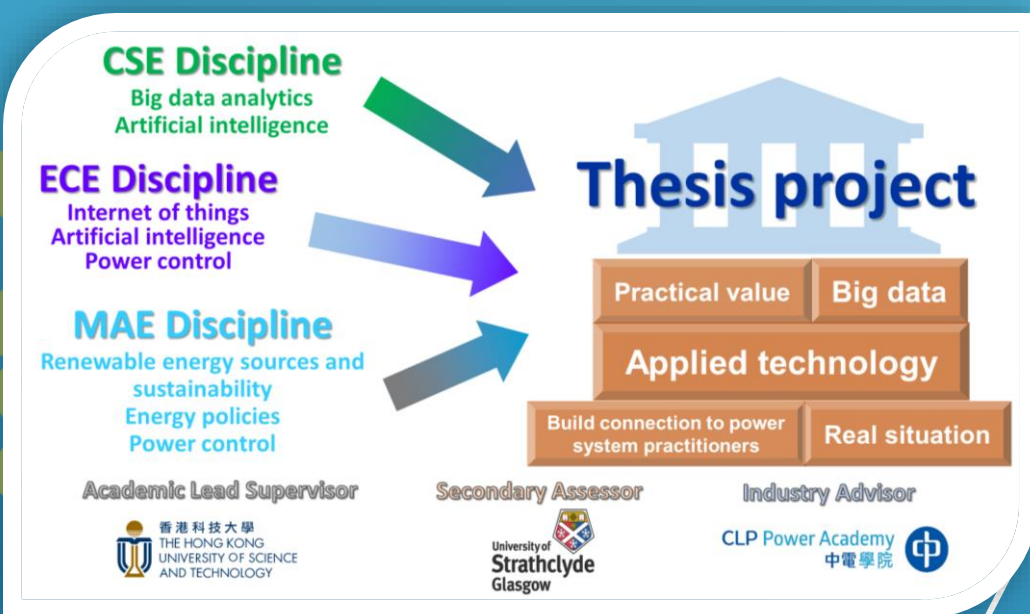
#### Professional practice module



# HKUST courses (student may choose 2 or similar courses out of the list):

Discipline	Computer Science and Engineering (CSE)	Electronic & Computer Engineering (ECE)	Mechanical and Aerospace Engineering (MAE)	Others
Topic	<ul style="list-style-type: none"> <li>Big data analytics</li> <li>Artificial intelligence</li> </ul>	<ul style="list-style-type: none"> <li>Internet of things</li> <li>Artificial intelligence</li> <li>Power control</li> </ul>	<ul style="list-style-type: none"> <li>Renewable energy sources and sustainability</li> <li>Energy policies</li> <li>Power control</li> </ul>	(Depending on specific energy-related research areas)
Course Code and Title	<b>MSBD 5003</b> Big Data Computing	<b>IBTM 5060</b> Building Internet of Things: Technologies, Big Data and Strategies for the Building Manager	<b>MECH 5280</b> Transport Phenomena and Its Application in Energy Systems	<b>CENG 5910</b> Energy, Environment and Sustainable Development
	<b>COMP 5312</b> Introduction to Big Data	<b>COMP 5211</b> Advanced Artificial Intelligence	<b>MECH 5230</b> Computational Fluid Dynamics and Heat Transfer	
	<b>COMP 5211</b> Advanced Artificial Intelligence	<b>ELEC 5120</b> Semiconductor Power and Energy Conversion Technologies	<b>MECH 5430</b> Thermodynamics and Kinetics of Materials	
	<b>COMP 6211</b> Advanced Topics in Artificial Intelligence	<b>ELEC 5650</b> Introduction to Networked Sensing, Estimation and Control	<b>MECH 5925</b> LED Packaging Technology for Solid-State Lighting	

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



## Graduation:

- Upon successful completion of the thesis project and passing of all modules/courses, candidates will receive dual degrees from UoS (Master of Science) and from HKUST (Master of Philosophy)
- Graduate separately in Hong Kong and Glasgow

