COURSE DETAIL

ENERGY SYSTEMS IN A SUSTAINABLE WORLD
Country Hong Kong
Host Institution Hong Kong University of Science and Technology (HKUST)
Program(s) Hong Kong University of Science and Technology
UCEAP Course Level Lower Division
UCEAP Subject Area(s) Mechanical Engineering Engineering
UCEAP Course Number 19
UCEAP Course Suffix
UCEAP Official Title ENERGY SYSTEMS IN A SUSTAINABLE WORLD
UCEAP Transcript Title ENERGY SYS/SUSTAIN
UCEAP Quarter Units 4.50
UCEAP Semester Units 3.00

Course Description
With dwindling energy resources, environmental impact of fossil fuel utilization and concerns on energy security, sustainability has gained increasing importance. In fact, modern society relies on stable and inexpensive energy supply and renewable energy is a significant component of the new energy mix. The course tackles energy conversion, utilization and storage for renewable technologies such as wind, solar, biomass, fuel cells and hybrid systems. Thermodynamics concepts, including the first law and the description of the various forms of energy, will form the basis for identifying, analyzing and modeling renewable energy systems. The course also touches upon the environmental consequences of energy conversion and how renewable energy systems can be used effectively to mitigate global climate change.

Language(s) of Instruction
English

Host Institution Course Number
MECH1902

Host Institution Course Title
ENERGY SYSTEMS IN A SUSTAINABLE WORLD

Host Institution Campus
HKUST, Engineering

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mechanical and Aerospace Engineering

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