

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 Course Details

Host Institution Campus

HKUST, Engineering

Host Institution Faculty

Host Institution Degree

Host Institution Department

Mechanical and Aerospace Engineering

Course Last Reviewed

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