

COURSE DETAIL

RENEWABLE ENERGY: BASIC PRINCIPLES AND USE IN OUR SOCEITY

Country

China

Host Institution

Fudan University

Program(s)

Shanghai Summer

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Environmental Studies

UCEAP Course Number

106

UCEAP Course Suffix

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UCEAP Official Title

RENEWABLE ENERGY: BASIC PRINCIPLES AND USE IN OUR SOCEITY

UCEAP Transcript Title

RENEWABLE ENERGY

UCEAP Quarter Units

4.00

UCEAP Semester Units

Course Description

This course is to introduce Chinese and international students to the general knowledge of renewable energy (RE), including global energy needs; RE sources and potential; processes for RE generation, usage, storage and transportation; local applicability; and current frontiers of developments, to then guide students to more specialized areas of technical, environmental or policy-based aspects, with special focus on system integration and sustainable development. The general knowledge includes basic concepts in energy and energy systems, types of energy and their supply and demand, and major categories of RE sources and potential. The course will then move on to bioenergy, introducing various categories such as energy crops, agricultural and industrial waste, municipal waste, and algae as RE feedstock, and outline the related thermal, physical, chemical and biological processes. The material will then be examined through integrated lenses such as i) process optimization, ii) integration into existing energy and economy network, and iii) balanced sustainable development objectives.

Language(s) of Instruction

English

Host Institution Course Number

ENVI170002

Host Institution Course Title

RENEWABLE ENERGY: BASIC PRINCIPLES AND USE IN OUR SOCIETY

Host Institution Campus**Host Institution Faculty****Host Institution Degree****Host Institution Department**

Fudan International Summer Session 2024