

COURSE DETAIL

ENERGY AND WATER

Country

Spain

Host Institution

Carlos III University of Madrid

Program(s)

Carlos III University of Madrid

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Engineering

UCEAP Course Number

109

UCEAP Course Suffix

E

UCEAP Official Title

ENERGY AND WATER

UCEAP Transcript Title

ENERGY AND WATER

UCEAP Quarter Units

2.50

UCEAP Semester Units

1.70

Course Description

This course discusses the key aspects and concepts of thermal engineering and fluid mechanics and the impact of engineering solutions in a societal and environmental context. Topics include: water use (industrial, commercial, residential); climate change, population growth, and energy demand; water for energy and energy for water; water use in fossil fuel plants; water use in renewable-based plants; relationships among water use, fuel type, efficiency, technology, and environmental impacts; water scarcity, stress on water systems, and energy generation; strategies to reduce water use; processes for desalination and water reuse.

Prerequisites: Calculus I and II, Writing and Communication Skills, Thermal Engineering, Environmental Technology, Heat Power Plants, Engineering Fluid Mechanics

Language(s) of Instruction

English

Host Institution Course Number

16848

Host Institution Course Title

ENERGÍA Y AGUA

Host Institution Campus

Leganés

Host Institution Faculty

Escuela Politécnica Superior

Host Institution Degree

Grado en Ingeniería de la Energía

Host Institution Department

Departamento de Ingeniería Térmica y Fluidos

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