

# 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 Course Details**

<https://aplicaciones.uc3m.es/cpa/generaFicha?est=280&anio=2021&plan=452&asig=16...>

### **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

**Course Last Reviewed**

2021-2022

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