COURSE DETAIL

THERMAL ENGINEERING
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) Mechanical Engineering
UCEAP Course Number 103
UCEAP Course Suffix
UCEAP Official Title THERMAL ENGINEERING
UCEAP Transcript Title THERMAL ENGINEERING
UCEAP Quarter Units 5.00
UCEAP Semester Units 3.30

Course Description

This course offers an introduction to thermodynamics and heat transfer. Topics include: mass energy and entropy balance for closed and open systems; equipment under steady state-- nozzles, diffusers, pumps, compressors, turbines, hope and closed heat exchangers, and valves; Carnot cycle; Rankine cycle; Brayton cycle; internal combustion engines; inverse Carnot cycle; introduction to heat transfer-- Fourier's law, Newton's law, Stefan-Boltzmann's law; one-dimensional steady state conduction with and without heat generation; transient conduction; fins-- formulation and performance analysis.

Prerequisites: Calculus I, Calculus II, Physics I

Language(s) of Instruction

Host Institution Course Number
14193,14022

Host Institution Course Title
INGENIERÍA TÉRMICA

Host Institution Course Details
https://aplicaciones.uc3m.es/cpa/generaFicha?est=221&anio=2022&plan=446&asig=14...

Host Institution Campus
Leganés

Host Institution Faculty
Escuela Politécnica Superior

Host Institution Degree
Grado en Ingeniería Mecánica

Host Institution Department
Departamento de Ingeniería Térmica y Fluidos

Course Last Reviewed
2022-2023

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