Guia docent
205096 - 205096 - Recerca en Mecànica de Fluids

Última modificació: 19/04/2023

Unitat responsable: Escola Superior d’Enginyeries Industrial, Aeroespacial i Audiovisual de Terrassa
Unitat que imparteix: 729 - MF - Departament de Mecànica de Fluids.

Titulació: MÀSTER UNIVERSITARI EN ENGINYERIA INDUSTRIAL (Pla 2013), (Assignatura optativa).
MÀSTER UNIVERSITARI EN ENGINYERIA AERONÀUTICA (Pla 2014), (Assignatura optativa).
MÀSTER UNIVERSITARI EN ENGINYERIA ESPACIAL I AERONÀUTICA (Pla 2016), (Assignatura optativa).

Curs: 2023 Crèdits ECTS: 3.0 Idiomes: Anglès

PROFESSORAT

Professorat responsable: Francisco Javier Arias Montenegro
Altres: Salvador Augusto De Las Heras Jimenez

METODOLOGIES DOCENTS

The course is divided into:

1. Face-to-face activities. Lecture on selected topics in fluid mechanics. Theoretical subjects will be discussed.
   by the students, with guidance from the professor. Brief presentations by students may occasionally be
   requested.

2. Autonomous work. Self-study, problem solving, lectures on several topics

OBJECTIUS D'APRENENTATGE DE L'ASSIGNATURA

Learning outcomes:

- Identify the research process broadly as all exploratory activity of which the purpose is to come to a better
  understanding of the natural world.

- Identify the main parts involved in the research methodology and with particular reference in fluid
  mechanics.

- Solve a real actual research problem either proposed by the student or the teacher related to fluid
  mechanics.

- To endow student with the capacity to carry out an original research idea from its inception with guidance
  from the teacher to the publication of results in a journal.

HORES TOTALS DE DEDICACIÓ DE L'ESTUDIANTAT

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Dedicació total: 75 h
CONTINGUTS

Module 1: Research on Fluid Mechanics

Descripció:
1. Brief introduction to scientific method in scientific research on fluid mechanics
2. Tools in fluid mechanic’s research: experimentation and computational simulation
3. Essential guidelines for computational method benchmarking
4. The publication of research results: How to write and publish a scientific paper.

Dedicació: 75h
Grup gran/Teoria: 27h
Aprenentatge autònom: 48h

SISTEMA DE QUALIFICACIÓ

The assessment of the learning process is based on the following activities each one having a given weight in the final grade as follows:

1. An article written by the student on an identified research topic on fluid mechanics. This article could be potentially submitted to a peer review in an indexed journal: 50%
2. Oral presentations of the work done: 25%
3. Short quizzes posed during class sessions can occasionally be used to define deliverables. 25%