Guía docente
205096 - 205096 - Investigación en Mecánica de Fluidos

Última modificación: 19/04/2023

Unidad responsable: Escuela Superior de Ingenierías Industrial, Aeroespacial y Audiovisual de Terrassa
Unidad que imparte: 729 - MF - Departamento de Mecánica de Fluidos.

Titulación: MÁSTER UNIVERSITARIO EN INGENIERÍA INDUSTRIAL (Plan 2013). (Asignatura optativa).
MÁSTER UNIVERSITARIO EN INGENIERÍA AERONÁUTICA (Plan 2014). (Asignatura optativa).
MÁSTER UNIVERSITARIO EN INGENIERÍA ESPACIAL Y AERONÁUTICA (Plan 2016). (Asignatura optativa).

Curso: 2023 **Créditos ECTS:** 3.0 **Idiomas:** Inglés

PROFESORADO

Profesorado responsable: Francisco Javier Arias Montenegro

Otros: Salvador Augusto De Las Heras Jimenez

METODOLOGÍAS DOCENTES

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

OBJETIVOS DE APRENDIZAJE DE LA ASIGNATURA

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.

HORAS TOTALES DE DEDICACIÓN DEL ESTUDIANTADO

Tipo	Horas	Porcentaje
Horas grupo grande	19,0	25.33
Horas grupo pequeño	8,0	10.67
Horas aprendizaje autónomo	48,0	64.00

Dedicación total: 75 h

CONTENIDOS

Module 1: Research on Fluid Mechanics

Descripción:
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.

Dedicación: 75h
Grupo grande/Teoría: 27h
Aprendizaje autónomo: 48h

SISTEMA DE CALIFICACIÓN

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%