

60825 - New technologies in machinery and vehicles

Información del Plan Docente

Academic Year	2016/17
Academic center	110 - Escuela de Ingeniería y Arquitectura
Degree	532 - Master's in Industrial Engineering
ECTS	6.0
Course	2
Period	First semester
Subject Type	Optional
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

The learning process designed for this subject is based on the following:

The proposed methodology seeks to promote student work and focus on the practical calculation and optimization of mechanical systems and automotive issues.

Grouped In sessions the whole group would study descriptive aspects of the systems studied in the form of master class. Design criteria, procedures and sample calculations for the different systems are covered in the course practical cases are also explained.

Practical classes are created in order to design and optimize vehicle bodies in white and components in advanced materials through the management of numerical and experimental techniques. Actual design variables are handled. The evaluation focuses on the practical aspects of design and calculation of the systems studied. The criteria used in the

60825 - New technologies in machinery and vehicles

evaluation process are explained in this guide.

5.2.Learning activities

The course is organized with 45 hours of class during 15 weeks. Description of mechanical systems and vehicles, design procedures, calculation and test procedures are explained and case studies. Another 15 hours are given to small groups in computer or experimental laboratory to develop skills in solving actual problems and interpretation of results. Detailed information regarding laboratory practices is shown on the web.

More specifically:

A 01 Lecture (presentation of content by teachers, external experts). Troubleshooting and cases (practical exercises with all students of the subject)

A 02 Special practices (visits to company facilities of interest, etc.) 5,100

A 03 Labs (practical exercises in small groups of students)

A 04 Carrying out research or practical application.

A 05 revising and personal work

A 06 Evaluation tests

the following learning modules are proposed:

Module 1: New technologies in machines

Module 2: New technologies in vehicles

5.3.Program

5.4.Planning and scheduling

Scheduled sessions and presentation of works

Lectures and problem classes and practice sessions are held in the laboratory according to schedule set by the center (schedules available on their website).

The other activities will be planned depending on the number of students and will be available on <http://add.unizar.es>

5.5.Bibliography and recommended resources