66432 - Design and Development of the Industrial Process

Información del Plan Docente

Academic Year	2017/18
Faculty / School	110 - Escuela de Ingeniería y Arquitectura
Degree	330 - Complementos de formación Máster/Doctorado 536 - Master's in Mechanical Engineering
ECTS	4.5
Year	XX
Semester	Half-yearly
Subject Type	Optional, ENG/Complementos de Formación
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. It is based on the understanding of the application of experimental techniques and optimization in different areas of design and development of industrial processes. A wide range of teaching and learning tasks are implemented, such as lectures, industrial case studies, projects, and tutorials.

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5.2.Learning tasks

The course (4.5 ECTS: 112. 5 hours) includes the following learning tasks:

- Lectures (6 hours).
- Practice sessions of case studies (12 hours distributed in 6 two-hour sessions). They help improve the the acquisition
  and assimilation of the theoretical contents.
- Tutorials (26 hours). They will be used for evaluation, correction and clarification of aspects of the student's project, in order to analyze the possible shortcomings and answer questions to improve it.
- Project (62.5 hours).
- Project presentation (1 hour).

5.3.Syllabus

The course will address the following topics:

Topic 1. Planning, simulation and optimization of manufacturing processes.

- Technical Case in sheet-metal forming processes.

Topic 2. Performance optimization in industrial processes.

- Technical Case in design and configuration of production lines and warehouses.

Topic 3. Optimization of production systems management.

- Technical Case in costing, inventory and product identification.

5.4.Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the EINA website.

5.5.Bibliography and recommended resources

Students should consult research articles concerning their project , in addition to the notes available on the ADD, the recommended literature and software aids.