

29751 - Integrated Manufacturing

Información del Plan Docente

Academic Year	2016/17
Academic center	110 - Escuela de Ingeniería y Arquitectura
Degree	434 - Bachelor's Degree in Mechanical Engineering
ECTS	6.0
Course	4
Period	Second 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

5.2.Learning activities

5.3.Program

1) Mechanical design in process planning.

Geometric modeling systems (CAD).

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Design rules for structural and aesthetic parts.

2) Manufacturing and rapid prototyping.

Prototyping and integration phases in the product development cycle.

Manufacturing technologies and rapid prototyping.

Reverse engineering.

3) Planning manufacturing processes.

Planning mechanical forming processes.

Tools for molding and deformation processes.

4) Analysis of the feasibility of manufacturing by CAE.

Finite element in manufacturing processes and planning stages.

Validation of manufacturing process.

5) Planning machining processes.

CNC machining systems and high performance machining.

Machining strategies in CAM systems.

6) Concurrent Engineering and PLM.

Planning manufacturing processes in Concurrent Engineering environments.

Product data management (PDM).

CAD / CAM / CAE systems. Data exchange standards.

5.4.Planning and scheduling

5.5.Bibliography and recommended resources