

28825 - Manufacturing Processes II

Información del Plan Docente

Academic Year	2018/19
Subject	28825 - Manufacturing Processes II
Faculty / School	175 - Escuela Universitaria Politécnica de La Almunia
Degree	424 - Bachelor's Degree in Mechatronic Engineering
ECTS	6.0
Year	3
Semester	Second semester
Subject Type	Compulsory
Module	---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

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

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

1 Theory Classes: The theoretical concepts of the subject are explained and illustrative examples are developed as support to the theory when necessary, focus on relevant problems related to the different productive processes exposed.

2. Practical Classes: The teacher resolves practical problems or cases for demonstrative purposes. This type of teaching complements the theory shown in the lectures with practical aspects.

3. Laboratory Workshop. These classes are highly recommended for a better understanding of the concepts because those items whose calculation is done in theory classes are shown in working mode

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4. Tutorials related to any concept of the subject. This activity is developed in a presencial mode with a defined schedule or through the messaging and forum of the virtual classroom Moodle.

4.2.Learning tasks

Theory Classes. it will take 4 hours per week till the 50 hours, necessary to accomplish the objectives of the subject study, will be reached

Laboratory Workshop. it will take 5 seasons of 2 hours duration. The group is divided up into various groups, according to the laboratory capacity.

Study and personal work. This non-presential part is valued in about 90 hours, necessary for the study of theory, problem solving and revision of documents

Individual tutorials. Each teacher will publish a schedule of attention to the students throughout the four-month period

4.3.Syllabus

Unit 1. Processes of forming by plastic deformation. Introduction. Rolling. Forging. Extrusion. Deep drawing, Folding, Applications.

Unit 2. Processes of forming by subtractive manufacturing. Theory of metal machining. Cut parameters, Technology of cutting tools. Geometry. Cutting fluids, Highly efficient machining

Unit 3. Processes of plastics and composite forming. Introduction. Injection. Extrusion. Blowing. Calendering Mechanization. Rolling of composite materials.

Unit 4. CNC Machines Introduction. Lathe, milling machine, drill, etc. Geometry shapes obtained and processes.

4.4.Course planning and calendar

The theory classes and problems are given in the timetable established by the center, as well as the hours assigned to the practices.

The presentation of the works will be done on the last day of class of the subject.

4.5.Bibliography and recommended resources