

28825 - Manufacturing Process II

Syllabus Information

Academic year: 2024/25

Subject: 28825 - Manufacturing Process 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

The great variety of objects, parts and products on the market have been obtained through a more or less complex production process. Selecting the right production process is a global objective in the subject.

A production process is related to product quality, product economy, functionality and application of that product. Relating these variables implies that the student will be able to select materials, machines, tools, measuring instruments, process, etc... to achieve the product

2. Learning results

1. To know the behavior and technology of materials.
2. Select and design the appropriate manufacturing process for a mechanical element.
3. Drawing and interpreting plans and diagrams according to the appropriate standards and symbology.

3. Syllabus

Section 1.

Plastic Deformation Forming Processes

Introduction

Laminated

Forged

Extrusion

Embedding

Folding

Applications

Section 2.

Chip Forming Processes

Theory of Metal Machining, Cutting Parameters

Cutting Tool Technology, Geometry, Cutting Fluids

High Performance Machining

Assisted Manufacturing

Plastic and Composite Forming Processes

4. Academic activities

Lectures and laboratory practices. They will be developed at a rate of four hours per week, until completing 60 hours per week needed to cover the syllabus.

Laboratory practices. They will be carried out in subgroups adapted to the capacity of the laboratory.

Study and personal work. This non-attendance part is valued at about 90 hours, necessary for the study of theory, problem solving and review of scripts.

Tutorials and generic non face-to-face activities. A schedule of student hours will be posted throughout the quarter.

5. Assessment system

Continuous assessment

Laboratory practices:(10%) A report of the same is delivered according to the model.

Exercises, theoretical questions and proposed works:(10%) To be solved individually or in groups according to the case. Written evaluation tests:(80%) They will consist of written tests scored from 0 to 10 points. The final grade of such activity will be given by the arithmetic mean of these tests, provided that there is not a unit grade below 4 points, in this case the activity will be failed.

Global assessment test.

Following the regulations of the University of Zaragoza in this regard, in the subjects that have continuous or gradual assessment systems, a global evaluation test will be scheduled for those students who decide to opt for this second type of evaluation.

6. Sustainable Development Goals

4 - Quality Education

5 - Gender Equality

9 - Industry, Innovation and Infrastructure