Course guide
320060 - ACN - Adjustments and Numerical Control

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 712 - EM - Department of Mechanical Engineering.
Degree: BACHELOR’S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Optional subject).
Academic year: 2023 ECTS Credits: 6.0 Languages: Catalan, Spanish

LECTURER

Coordinating lecturer: Jordi Sans García

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Transversal:
1. SELF-DIRECTED LEARNING - Level 2: Completing set tasks based on the guidelines set by lecturers. Devoting the time needed to complete each task, including personal contributions and expanding on the recommended information sources.
2. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 2. Using strategies for preparing and giving oral presentations. Writing texts and documents whose content is coherent, well structured and free of spelling and grammatical errors.
3. TEAMWORK - Level 2. Contributing to the consolidation of a team by planning targets and working efficiently to favor communication, task assignment and cohesion.

TEACHING METHODOLOGY

- Theoretical sessions and resolution of exercises.
- Practical sessions in the laboratory (in groups).
- Independent work and study exercises.

LEARNING OBJECTIVES OF THE SUBJECT

- Introduce concepts, techniques and methodologies in the area of conventional and computerized manufacturing
- Familiarization and use technical language typical of industrial environment

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Hours large group</td>
<td>30,0</td>
<td>20.00</td>
</tr>
<tr>
<td>Hours small group</td>
<td>30,0</td>
<td>20.00</td>
</tr>
<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
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</tbody>
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Total learning time: 150 h
## CONTENTS

### Milling CNC in two axes and half

**Description:**
- MILLING CNC
- TOOLS
- WORK PLANS
- CASHIER AND ISLANDS
- BORING

**Full-or-part-time:** 16h  
Theory classes: 16h

### Milling in three axes

**Description:**
- SPHERICAL AND TOROIDAL TOOLS
- PLANNING STRATEGIES
- DIFFERENT TYPES OF FINISH

**Full-or-part-time:** 16h  
Theory classes: 16h

### CNC Turning

**Description:**
- WORK PLANS
- TOOLS
- PLANNING
- FINISHING
- BORING
- INTERIOR TURNING

**Full-or-part-time:** 16h  
Theory classes: 16h

### 3D Printing

**Description:**
- HOW TO PROPERLY DESIGN A PIECE INTENDED TO PRINT  
- IMPORTANT PARAMETERS TO PRINT  
- USING CAM PROGRAMS  
- PRINTING

**Full-or-part-time:** 8h  
Theory classes: 8h
GRADING SYSTEM

During the course will be given five practices, three of milling machine and two of lathe, in case of being delivered, will give access to a test for each one of them to deliver in the term marked by the professor. Each test will have a weight of 20% of the final mark. It is possible that some other non-evaluable practice has to be delivered in order to obtain the final mark.

BIBLIOGRAPHY

Basic:

Complementary:

RESOURCES

Computer material:
- PROGRAMA CAM. CAM 'ROGRAM