Course guide
220615 - 220615 - Data Processing, Storage, Validation and Automated Production Management

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 707 - ESAII - Department of Automatic Control.
Degree: MASTER'S DEGREE IN AUTOMATIC SYSTEMS AND INDUSTRIAL ELECTRONICS (Syllabus 2012). (Optional subject).
Academic year: 2022  ECTS Credits: 5.0  Languages: Catalan

LECTURER
Coordinating lecturer: JOSEBA QUEVEDO
Others: RITA MARIA PLANAS, JAUME FIGUERAS

PRIOR SKILLS

REQUIREMENTS

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. Research, analysis, design and implementation of ISA88, ISA 95 or ISA97 standards in automated production systems to manage all the data associated to the global management of the manufacturing plant.
5. Identify, select, design and implement Information systems solution and algorithm implementation for data managing in different levels of automation.

Transversal:
2. EFFECTIVE USE OF INFORMATION RESOURCES. Managing the acquisition, structure, analysis and display of information from the own field of specialization. Taking a critical stance with regard to the results obtained.
4. TEAMWORK. Being able to work as a team player, either as a member or as a leader. Contributing to projects pragmatically and responsibly, by reaching commitments in accordance to the resources that are available.
6. SELF-DIRECTED LEARNING. Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.
3. EFFICIENT ORAL AND WRITTEN COMMUNICATION. Communicating verbally and in writing about learning outcomes, thought-building and decision-making. Taking part in debates about issues related to the own field of specialization.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

**STUDY LOAD**

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours small group</td>
<td>14,0</td>
<td>11.20</td>
</tr>
<tr>
<td>Hours large group</td>
<td>31,0</td>
<td>24.80</td>
</tr>
<tr>
<td>Self study</td>
<td>80,0</td>
<td>64.00</td>
</tr>
</tbody>
</table>

Total learning time: 125 h

**CONTENTS**

**Description:**

**Specific objectives:**

**Related activities:**

**Full-or-part-time:** 6h
- Theory classes: 1h
- Self study: 5h

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**Description:**

**Specific objectives:**

**Related activities:**

**Full-or-part-time:** 45h
- Theory classes: 9h
- Guided activities: 11h
- Self study: 25h

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**Description:**

**Specific objectives:**

**Related activities:**

**Full-or-part-time:** 45h
- Theory classes: 12h
- Guided activities: 9h
- Self study: 24h
ACTIVITIES

Description:

Specific objectives:

Material:

Delivery:

Full-or-part-time: 90h
Theory classes: 30h
Self study: 60h

Description:

Specific objectives:

Material:

Delivery:

Full-or-part-time: 37h
Theory classes: 12h
Self study: 25h

Description:

Specific objectives:

Material:

Full-or-part-time: 6h
Theory classes: 6h
GRADING SYSTEM

The evaluation is based mainly on the degree and level of student participation throughout the course in the class sessions (contribution to the discussion of topics, approach and resolution of issues, ...), and in the development, conclusions and Presentation of their practical work. In addition, two written tests of all the parts of the subject will be carried out.

The weighting of each of these evaluation activities in the final grade will be 35% for the written test of the first part, 35% for the written test of the final exam and 30% for the overall mark of the practical reports submitted to the final exam. End of each practice session.

In order to revert the unsatisfactory results of the theory examination of the first part, the possibility of doing, in the act of evaluating the second part, is made a final theoretical examination that includes the contents of the first and second partial. To this modality can accede all the students of the subject. The grade of this final exam of theory corresponding to the agenda of the first part will replace that obtained in the first part only if it is higher.

Anyone who wishes to opt for this renewal mechanism can do so by prior enrollment in the Digital Campus of the subject (or simply by sending an email to the teacher) up to 48 hours before the final exam date. The notes of the laboratory practices are exempt of this mencanisme of redemption.

For those students who meet the requirements and submit to the reevaluation examination, the grade of the reevaluation exam will replace the grades of all the on-site written evaluation acts (tests, midterm and final exams) and the grades obtained during the course for lab practices, works, projects and presentations will be kept.

If the final grade after reevaluation is lower than 5.0, it will replace the initial one only if it is higher. If the final grade after reevaluation is greater or equal to 5.0, the final grade of the subject will be pass 5.0.

EXAMINATION RULES.

BIBLIOGRAPHY

Basic: