820229 - SICIEIA - Information Systems and Industrial Communication

Coordinating unit: 295 - EEBE - Barcelona East School of Engineering
Teaching unit: 707 - ESAII - Department of Automatic Control
Academic year: 2017
Degree: BACHELOR’S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)
BACHELOR’S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)
ECTS credits: 6

Teaching staff

Coordinator: Javier Gámiz
Others: Javier Gámiz, Juan Gámiz

Degree competences to which the subject contributes

Specific:
1. Enter the student / the concepts of the various industrial communication techniques, terminology and the reference standards
2. To enable the student / a to discern the functional characteristics of wireless communications and communication networks to plan based industrial field buses.
3. Enter the student / the basic concepts of systems Supervisory Control and Data Acquisition and enable the student / a to define and configure the functionality of the (input-output historical databases, synoptic charts, etc.. ).

Transversal:
1. EFFECTIVE USE OF INFORMATION RESOURCES - Level 3. Planning and using the information necessary for an academic assignment (a final thesis, for example) based on a critical appraisal of the information resources used.

Teaching methodology

The course uses the methodology exhibition by 38%, individual learning in a 59.3% and evaluation sessions at 2.7%.

Learning objectives of the subject

1. Enter the student / the concepts of the various industrial communication techniques, terminology and the reference standards
2. To enable the student / a to discern the functional characteristics of wireless communications and communication networks to plan based industrial field buses.
4. Enter the student / the basic concepts of systems Supervisory Control and Data Acquisition and enable the student / a to define and configure the functionality of the (input-output historical databases, synoptic charts, etc.. ).
# Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group:</th>
<th>45h</th>
<th>30.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hours medium group:</td>
<td>0h</td>
<td>0.00%</td>
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<tr>
<td></td>
<td>Hours small group:</td>
<td>15h</td>
<td>10.00%</td>
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<tr>
<td></td>
<td>Guided activities:</td>
<td>0h</td>
<td>0.00%</td>
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<tr>
<td></td>
<td>Self study:</td>
<td>90h</td>
<td>60.00%</td>
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</tbody>
</table>
| (ENG) Tema 1: Classificació de les xarxes de comunicació | Learning time: 15h  
Theory classes: 6h  
Self study: 9h |
| (ENG) Tema 2: Xarxes d'àrea local i busos de camp | Learning time: 16h  
Theory classes: 6h  
Laboratory classes: 2h  
Self study: 8h |
| (ENG) Tema 3: Xarxes deterministes i no deterministes | Learning time: 16h  
Theory classes: 6h  
Laboratory classes: 2h  
Self study: 8h |
| (ENG) Tema 4: Planificació de xarxes | Learning time: 16h  
Theory classes: 6h  
Laboratory classes: 2h  
Self study: 8h |
| (ENG) Tema 5: Introducció als sistemes de Supervisió, Control i Adquisició de Dades | Learning time: 16h  
Theory classes: 6h  
Laboratory classes: 2h  
Self study: 8h |
| (ENG) Tema 6: Arquitectures dels sistemes Scada | Learning time: 16h  
Theory classes: 6h  
Laboratory classes: 2h  
Self study: 8h |
### Qualification system

- First control: 25%
- Second check: 30%
- Practice Lab: 25%
- Other controls: 20%

### Regulations for carrying out activities

The evaluation method of this course meets the current academic regulations to be qualified: NO REVALUABLE.

### Bibliography

- (ENG) Tema 7: Parametrització d'un sistema Scada
  
  **Learning time:** 16h  
  Theory classes: 6h  
  Laboratory classes: 2h  
  Self study: 8h

- (ENG) Tema 8: Avaluació de la interfície d'un sistema Scada
  
  **Learning time:** 39h  
  Theory classes: 5h  
  Laboratory classes: 2h  
  Self study: 32h