820059 - DCI - Design, Creativity & Innovation

Coordinating unit: 295 - EEBE - Barcelona East School of Engineering
Teaching unit: 717 - EGE - Department of Engineering Presentation
Academic year: 2015
Degree:
BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN BIOMEDICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN ENERGY ENGINEERING (Syllabus 2009). (Teaching unit Optional)
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BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING
(Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN BIOMEDICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
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BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING
(Syllabus 2009). (Teaching unit Optional)
ECTS credits: 6 Teaching languages: Catalan

Teaching staff
Coordinator: JOAQUIN FERNANDEZ SANCHEZ
Others: JOAQUIN FERNANDEZ SANCHEZ

Degree competences to which the subject contributes

Specific:
1. Understand spatial vision and graphic representation techniques, whether using traditional metric and
   descriptive geometry methods or computer assisted design applications.
2. Understand the applications of business organisation.
3. Understand the basics of production and manufacturing systems.

Transversal:
4. ENTREPRENEURSHIP AND INNOVATION - Level 3. Using knowledge and strategic skills to set up and manage
   projects. Applying systemic solutions to complex problems. Devising and managing innovation in organizations.
5. TEAMWORK - Level 3. Managing and making work groups effective. Resolving possible conflicts, valuing working
   with others, assessing the effectiveness of a team and presenting the final results.

Teaching methodology

The method is based on the combination of three techniques:
1. Class presentations of the professor
2. Active participation of students, based on individual exercises discussion.
3. Development of a collaborative project

Learning objectives of the subject

The main objective is to introduce students to creativity and design driven innovation in the context of technology.
Technology & Design forms a key driver of the new global industry and services, and its study in the context of training of engineers facilitates the connection between engineering and markets, where firms operate.

### Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group: 45h</th>
<th>30.00%</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Hours medium group: 0h</td>
<td>0.00%</td>
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<tr>
<td></td>
<td>Hours small group: 15h</td>
<td>10.00%</td>
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<td></td>
<td>Guided activities: 0h</td>
<td>0.00%</td>
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<tr>
<td></td>
<td>Self study: 90h</td>
<td>60.00%</td>
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</tbody>
</table>
## Content

<table>
<thead>
<tr>
<th>(ENG) Disseny i creativitat. Conceptes i models.</th>
<th>Learning time: 20h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 4h</td>
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<tr>
<td></td>
<td>Laboratory classes: 4h</td>
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<tr>
<td></td>
<td>Self study: 12h</td>
</tr>
</tbody>
</table>

**Description:**

(ENG) Comprendre les actituds, els models i el procés de creativitat i disseny

<table>
<thead>
<tr>
<th>(ENG) Noves Tendències. Cool Hunting.</th>
<th>Learning time: 20h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 4h</td>
</tr>
<tr>
<td></td>
<td>Laboratory classes: 4h</td>
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<tr>
<td></td>
<td>Self study: 12h</td>
</tr>
</tbody>
</table>

**Description:**

(ENG) Identificar les tendències en els models de negoci i la seva relació amb la innovació en el disseny impulsat.

<table>
<thead>
<tr>
<th>(ENG) La integració entre els serveis i productes.</th>
<th>Learning time: 20h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 4h</td>
</tr>
<tr>
<td></td>
<td>Laboratory classes: 4h</td>
</tr>
<tr>
<td></td>
<td>Self study: 12h</td>
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</tbody>
</table>

**Description:**

(ENG) Comprendre els conceptes i mètodes per a la creació de productes i serveis innovadors orientats a l’èxit comercial de les empreses.

<table>
<thead>
<tr>
<th>(ENG) Gestió del disseny.</th>
<th>Learning time: 20h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 4h</td>
</tr>
<tr>
<td></td>
<td>Laboratory classes: 4h</td>
</tr>
<tr>
<td></td>
<td>Self study: 12h</td>
</tr>
</tbody>
</table>

**Description:**

(ENG) Entendre el procés de seguiment i comunicació del disseny a través de la cadena de valor en l’empresa.
## Qualification system

Pretest at the beginning of each class: 25 %  
Individual exercise: 25 %  
Group Collaborative exercise: 50 %
Bibliography

Basic:


Others resources: