340005 - ACAP-07P40 - Accessibility Applied

Coordinating unit: 340 - EPSEVG - Vilanova i la Geltrú School of Engineering
Teaching unit: 744 - ENTEL - Department of Network Engineering
Academic year: 2017
Degree: BACHELOR'S DEGREE IN ELECTRONIC SYSTEMS ENGINEERING (Syllabus 2010). (Teaching unit Optional)
BACHELOR'S DEGREE IN INDUSTRIAL DESIGN AND PRODUCT DEVELOPMENT ENGINEERING (Syllabus 2009). (Teaching unit Optional)
BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2010). (Teaching unit Optional)
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 MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
ECTS credits: 6
Teaching languages: Catalan, Spanish

Teaching staff

Coordinator: Daniel Guasch Murillo (CATAC, ENTEL)
Ponsa Asensio, Pere (ESAII)

Others: Guasch Murillo, Daniel
Ponsa Asensio, Pere
Morillas Varón, Rafael

Opening hours

Timetable: Wednesday: 10:00 p.m. to 13:00 p.m.
Thursdays: 10:00 p.m. to 13:00 p.m.

Prior skills

The students must show the previous skills acquired along the Degree.

Requirements

Degree competences to which the subject contributes

Generical:

- Accessibility: Know and apply criteria of universal design in different products, environment and services.

Transversal:

04 COE N3. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.
06 URI N3. 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.
05 TEQ N3. 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.
07 AAT N3. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its
The aim is for students to consolidate skills obtained in the subjects of the degree by applying what he learned in real scenarios.

Teaching methodology

The aim is for students to consolidate skills obtained in the subjects of the degree by applying what he learned in (real, simulated) scenarios. Theoretical concepts will in order to put in context the framework and was the starting point for the analysis and design to realize. The projects will be defined so that they can become a Final Project. It will enhance the performance of work in multidisciplinary teams using project-based learning model and role playing.

Learning objectives of the subject

The aim is for students to consolidate skills obtained in the subjects of the degree by applying what he learned in real scenarios.

Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group:</th>
<th>30h</th>
<th>20.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours medium group:</td>
<td>0h</td>
<td></td>
<td>0.00%</td>
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<tr>
<td>Hours small group:</td>
<td>15h</td>
<td></td>
<td>10.00%</td>
</tr>
<tr>
<td>Guided activities:</td>
<td>0h</td>
<td></td>
<td>0.00%</td>
</tr>
<tr>
<td>Self study:</td>
<td>105h</td>
<td></td>
<td>70.00%</td>
</tr>
</tbody>
</table>
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## Content

<table>
<thead>
<tr>
<th>1. Advanced Accessibility</th>
<th>Learning time: 10h</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>Theory classes: 10h</td>
</tr>
<tr>
<td>1.1 Link between accessibility, ICT and Engineering</td>
<td></td>
</tr>
<tr>
<td>1.2 Teamwork</td>
<td></td>
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<tr>
<td>1.3 Example: Accessibility in Public Building</td>
<td></td>
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<tr>
<td>1.4 Phases of a human-centred design process</td>
<td></td>
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<tr>
<td>1.5 Accessible documentation</td>
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</table>

**Related activities:**
The lecture reinforces aspects of documentation and development phases of a project useful to the practical part of the course.

**Specific objectives:**
Consolidate basic knowledge.

<table>
<thead>
<tr>
<th>2. Project</th>
<th>Learning time: 34h</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>Theory classes: 34h</td>
</tr>
<tr>
<td>2.1 Teamrol and preselected project-</td>
<td></td>
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<tr>
<td>2.2 Requirements Analysis</td>
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<tr>
<td>2.3 Conceptual Design</td>
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<tr>
<td>2.4 Prototyping</td>
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<tr>
<td>2.5 User Experience</td>
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<tr>
<td>2.6 Project management</td>
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**Related activities:**
Some laboratory sessions are designed that serve to support the project. The tools to be used in AL-116 are: Google forms, Google SketchUp, Justinmind Prototyper among others.

**Specific objectives:**
Specify, design and evaluate a project.
Planning of activities

<table>
<thead>
<tr>
<th>Applied Accessibility Project</th>
<th>Hours: 41h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 26h</td>
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<tr>
<td></td>
<td>Laboratory classes: 15h</td>
</tr>
</tbody>
</table>

**Description:**
The course is structured around (real, simulated) projects for organizations in the region or units of the university. The projects will be defined so that they can become a Final Project. It will enhance the performance of work in multidisciplinary groups.

**Support materials:**
Based on project requirements and resources available in the laboratory.

**Descriptions of the assignments due and their relation to the assessment:**
It defines three key deliverables: the report of a draft specification of the user in the evaluation period partial (25%), a technical report two weeks before the end of the course (45%) and presentation of work the last week of the course (20%).
In addition to the deliverables, evaluate group work in class and monitoring (10%).

**Specific objectives:**
Know how to apply and develop skills related to accessibility applied to group work and oral communication.

Qualification system

The course will be evaluated based on the criteria: the difficulty of the effort and field work, the quality of the proposal presented in a technical report and public presentation of the work done in class.

- **Written Accessibility Exam (10%)**
- **Preliminary Report (20%)**
- **Technical report (40%)**
- **Presentation of the work (20%).**
- **Teamwork and monitoring in class (10%).**
Regulations for carrying out activities

The works must be original, technically feasible and reaching the goals set by users.

Bibliography

Basic:


Others resources:

Hyperlink

CEAPAT. Tecnologías y personas mayores
http://www.ceapat.es/InterPresent1/groups/imserso/documents/binario/reto_8.pdf

Computer material

Modelo de Proceso de la Ingeniería de la usabilidad y de la accesibilidad

Nom recurPatrick W. Roe. Towards an inclusive future, COST 219. 2007