270603 - TMIRI - Techniques and Methodology of Innovation and Research in Informatics

Coordinating unit: 270 - FIB - Barcelona School of Informatics
Teaching unit: 723 - CS - Department of Computer Science
Academic year: 2018
Degree: MASTER'S DEGREE IN INNOVATION AND RESEARCH IN INFORMATICS (Syllabus 2012). (Teaching unit Compulsory)
ECTS credits: 6
Teaching languages: Catalan

Degree competences to which the subject contributes

**Generical:**
CG1. Capability to apply the scientific method to study and analyse of phenomena and systems in any area of Computer Science, and in the conception, design and implementation of innovative and original solutions.
CG2. Capability to lead, plan and supervise multidisciplinary teams.

CG4. Capacity for general and technical management of research, development and innovation projects, in companies and technology centers in the field of Informatics Engineering.

**Transversal:**
CTR1. ENTREPRENEURSHIP AND INNOVATION: Capacity for knowing and understanding a business organization and the science that rules its activity, capability to understand the labour rules and the relationships between planning, industrial and commercial strategies, quality and profit. Capacity for developing creativity, entrepreneurship and innovation trend.
CTR2. SUSTAINABILITY AND SOCIAL COMMITMENT: Capability to know and understand the complexity of the typical economic and social phenomena of the welfare society. Capacity for being able to analyze and assess the social and environmental impact.
CTR4. INFORMATION LITERACY: Capability to manage the acquisition, structuring, analysis and visualization of data and information in the area of informatics engineering, and critically assess the results of this effort.
CTR6. REASONING: Capacity for critical, logical and mathematical reasoning. Capability to solve problems in their area of study. Capacity for abstraction: the capability to create and use models that reflect real situations. Capability to design and implement simple experiments, and analyze and interpret their results. Capacity for analysis, synthesis and evaluation.

Teaching methodology

Different types of activities, such as attending lessons, reading and studying additional material (articles and book chapters) to acquire complementary knowledge, and oral presentations, will be distributed within a total of 6 ECTS (180 work hours).

Learning objectives of the subject

1. Be aware of the Scientific Method, develop critical thinking, learn the process of writing a scientific paper, learn tools to help in the scientific process
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### Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Theory classes: 54h</th>
<th>36.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Practical classes: 0h</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>Laboratory classes: 0h</td>
<td>0.00%</td>
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<tr>
<td></td>
<td>Guided activities: 0h</td>
<td>0.00%</td>
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<tr>
<td></td>
<td>Self study: 96h</td>
<td>64.00%</td>
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</tbody>
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### Content

#### Scientific Method

Degree competences to which the content contributes:

#### Critical Thinking

Degree competences to which the content contributes:
Description:

#### Science World

Degree competences to which the content contributes:
Description:

#### Scientific papers

Degree competences to which the content contributes:
Description:

#### Integrity and ethics

Degree competences to which the content contributes:
Description:
The evaluation will be based on: essays, tests and public presentations

**Bibliography**

**Basic:**