Course guide
340681 - SMAC - Smart Cities

Unit in charge: Vilanova i la Geltrú School of Engineering
Teaching unit: 701 - DAC - Department of Computer Architecture.
Degree: BACHELOR’S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2018). (Optional subject).
Academic year: 2023  ECTS Credits: 6.0  Languages: Catalan

LECTURER

Coordinating lecturer: Jordi Garcia

Others:

PRIOR SKILLS

- 

REQUIREMENTS

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DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
I_CECO4. CECO4. Ability to learn basics, paradigms and techniques of intelligent systems and analyze, design and build systems, services and computing applications that use these techniques in any scope.
I_CEFB5. CEFB5. Knowledge of informatic systems, its structure, function and interconnection, as well as fundamentals of its programming.
I_CEFC1. CEFC1. Ability to design, develop, select and value applications and informatic systems affirming its reliability, security and quality corresponding to ethical principals and legislation and current rules.
I_CEFC11. CEFC11. Knowledge and application characteristics, functions and structure of Distributed Systems, Computer Networks and the Internet and design and implement applications based on them.
I_CEFC15. CEFC15. Knowledge and application of basic principles and techniques of intelligent systems and their practical application.
I_CEFC2. CEFC2. Ability to plan, conceive, develop, manage informatic projects, services and systems in all areas, leading their implementation and continuous improvement assaying their economic and social repercussions.
I_CESI4. CESI4. Ability to understand and apply the principles and practices of organizations, so they can be interfaces between communities and technical management of an organization and actively participate in the training of users.
Transversal:
01 EIN. ENTREPRENEURSHIP AND INNOVATION: Knowing about and understanding how businesses are run and the sciences that govern their activity. Having the ability to understand labor laws and how planning, industrial and marketing strategies, quality and profits relate to each other.
02 SCS. SUSTAINABILITY AND SOCIAL COMMITMENT. Being aware of and understanding the complexity of social and economic phenomena that characterize the welfare society. Having the ability to relate welfare to globalzation and sustainability. Being able to make a balanced use of techniques, technology, the economy and sustainability.
CT3. TEAMWORK: Being able to work in an interdisciplinary team, whether as a member or as a leader, with the aim of contributing to projects pragmatically and responsibly and making commitments in view of the resources that are available.
CT4. EFFECTIVE USE OF INFORMATION RESOURCES: Managing the acquisition, structuring, analysis and display of data and information in the chosen area of specialisation and critically assessing the results obtained.
CT5. FOREIGN LANGUAGE: Achieving a level of spoken and written proficiency in a foreign language, preferably English, that meets the needs of the profession and the labour market.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

<table>
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<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
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<tr>
<td>Hours small group</td>
<td>30,0</td>
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<td>Hours large group</td>
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<tr>
<td>Self study</td>
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Total learning time: 150 h

CONTENTS

1. Introducció al concepte de Smart City

Description:
content english

Full-or-part-time: 2h
Theory classes: 2h

2. Les ciutats del futur

Description:
content english

Full-or-part-time: 2h
Theory classes: 2h
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<table>
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| 3. IoT: Sensors i actuadors | Description: content english  
Full-or-part-time: 2h  
Theory classes: 2h |
| 4. Xarxes de sensors | Description: content english  
Full-or-part-time: 2h  
Theory classes: 2h |
| 5. Centres de dades | Description: content english  
Full-or-part-time: 2h  
Theory classes: 2h |
| 6. Serveis intel·ligents | Description: content english  
Full-or-part-time: 2h  
Theory classes: 2h |
| 7. Smart environment | Description: content english  
Full-or-part-time: 2h  
Theory classes: 2h |
| 8. Smart mobility | Description: content english  
Full-or-part-time: 2h  
Theory classes: 2h |
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<th>Theory classes:</th>
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<tr>
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15. Politiques de gestió per a les Smart Cities

Description:
content english

Full-or-part-time: 2h
Theory classes: 2h

GRADING SYSTEM