Course guide
310519 - 310519 - Smart Cities

Unit in charge: Barcelona School of Building Construction
Teaching unit: 751 - DECA - Department of Civil and Environmental Engineering.
Degree: MASTER'S DEGREE IN BUILDING CONSTRUCTION MANAGEMENT (Syllabus 2015). (Optional subject).
Academic year: 2022  ECTS Credits: 5.0  Languages: Spanish

LECTURER

Coordinating lecturer: MIGUEL YURY MAYORGA CÁRDENAS

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CE08MUGE. Apply planning techniques of production from its strategic and operative aspects.

General:
CG4MUGE. Analyse, evaluate and synthesise critically, the information to propose solutions or alternatives to situations arising from building management processes.

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 globalization and sustainability. Being able to make a balanced use of techniques, technology, the economy and sustainability.
05 TEQ. TEAMWORK. Being able to work as a team player, either as a member or as a leader. Contributing to projects pragmatically and responsibly, by reaching commitments in accordance to the resources that are available.

Basic:
CB8. The students must be able to integrate knowledges and front to the complexity to formulate opinions from an information which, being incomplete or limited, includes reflections about the social and ethical responsibilities linked to the application of their knowledges and opinions.
CB9. The students must be able to communicate their conclusions and the knowledges and ultimate reasons which support to specialised and non-specialised audiences in a clear mode and without ambiguities.

TEACHING METHODOLOGY

- Exhibition and realization of critical readings, synthesis, presentation and essay writing
- Exercises for comparison and case evaluation
- Making reflections, arguments and debates
- Carry out analysis, evaluation and elaboration of proposals
LEARNING OBJECTIVES OF THE SUBJECT

Introduce from a critical, holistic and integral approach, through reflections on theoretical concepts, exemplification of current cases and practical exercises, a vision on the potentials of the use of new technologies in management and improvement of urban habitat conditions.

In order to:
- Understand the advantages and limits of the application of new technologies in the city.
- Formulate a set of criteria for the appraisal of applications, case studies and experiences.
- Propose new technological solutions for the management of the city.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self study</td>
<td>90.0</td>
<td>72.00</td>
</tr>
<tr>
<td>Hours medium group</td>
<td>5.0</td>
<td>4.00</td>
</tr>
<tr>
<td>Hours large group</td>
<td>15.0</td>
<td>12.00</td>
</tr>
<tr>
<td>Guided activities</td>
<td>10.0</td>
<td>8.00</td>
</tr>
<tr>
<td>Hours small group</td>
<td>5.0</td>
<td>4.00</td>
</tr>
</tbody>
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Total learning time: 125 h

CONTENTS

Smart Cities

Description:
Introduce from a critical, holistic and integral approach, through reflections on theoretical concepts, exemplification of current cases and practical exercises, a vision on the potentials of the use of new technologies in management and improvement of urban habitat conditions.

Specific objectives:
- Understand the advantages and limits of the application of new technologies in the city.
- Formulate a set of criteria for the appraisal of applications, case studies and experiences.
- Propose new technological solutions for the management of the city.

Related activities:
- Conferences
- Visits

Full-or-part-time: 30h
Theory classes: 13h 20m
Practical classes: 13h 20m
Guided activities: 3h 20m

GRADING SYSTEM
BIBLIOGRAPHY

Basic:
- ""La mitificación de las nuevas tecnologías como respuesta a los retos de las ciudades contemporáneas"". Economía Industrial nº 395.
- Smart Cities: un primer paso hacia la internet de las cosas. FUNDACIÓN TELEFONICA, 2011.
- MARCH, Hug y Ramón RIBERA-FUMAZ . ""Una revisión crítica desde la Ecología Política Urbana del concepto Smart City en el Estado español"". Ecología Política: Cuadernos de debate internacional, 47:29-36.
- MAYORGA, Miguel & FONTANA, Maria Pia. ""Hacia una calle más habitable: nuevas tecnologías y movilidad sostenible"". SERES URBANOS. EL PAÍS, 10/10/2108 .
- AAVV. Smart City Trends Tendencias en las Ciudades Inteligentes y oportunidades para los sectores del hábitat. ITC y AIDIMA , 2015.
- CABRERA, Daniel . Lo tecnológico y lo imaginario. Las nuevas tecnologías como creencias y esperanzas colectivas. 2006.