210709 - SUMAA - Urban Sustainability and Environmental Evaluation
Methodologies

Coordinating unit: 210 - ETSAB - Barcelona School of Architecture
Teaching unit: 753 - TA - Department of Architectural Technology
Academic year: 2019
Degree: MASTER’S DEGREE IN ADVANCED STUDIES IN ARCHITECTURE-BARCELONA (Syllabus 2015).
(Teaching unit Optional)
ECTS credits: 5  Teaching languages: Spanish

Teaching staff
Coordinator: JOSE NICASIO ROCA CLADERA

Teaching methodology
Go to Spanish or Catalan version.

Learning objectives of the subject
Go to Spanish or Catalan version.

Study load

<table>
<thead>
<tr>
<th>Total learning time: 125h</th>
<th>Hours large group: 15h</th>
<th>12.00%</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: 30h</td>
<td>24.00%</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: 80h</td>
<td>64.00%</td>
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<table>
<thead>
<tr>
<th>Content</th>
<th>Learning time: 125h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 15h</td>
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<tr>
<td></td>
<td>Laboratory classes: 30h</td>
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<tr>
<td></td>
<td>Self study : 80h</td>
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**Description:**
- Principles and foundations of the Urban Ecology applied to the analysis of the territorial and urban sustainability. The city as an ecosystem. Balance of matter, energy and information of urban and territorial systems.
- Main indicators of territorial and urban sustainability: conservation of the ecological matrix of the territory, land consumption and save natural resources, energy efficiency, conservation and sustainable use of biodiversity, ecological permeability, water cycle, landscape quality, etc., relating them to the various models of city and land use.
- The main areas, instruments and techniques of analysis, evaluation, planning and management of architectural, urban and regional implementation, with particular emphasis on its role in the framework of the strategies towards sustainability and action plans arising from according to the following structure: a) Valuation of non-market goods (environment) of architectural, urban and territorial nature, b) analytical instruments, environmental planning and land management; environmental information systems, diagnosis and environmental audits, instruments of citizen participation, strategic planning instruments for sustainability: agendas 21s and local action plans, environmental planning, networks of protected areas, control of air pollution (substances, light electromagnetic, ...), mobility planning, environmental assessment of plans, programs and projects, monitoring of sustainability indicators, ecological footprint, etc.

**Specific objectives:**
- Deepen in the knowledge and application of ecosystem theories for the interpretation of urban and territorial systems in the context of the discipline of Urban Ecology: flows of matter, energy and information.
- Develop the concept of sustainability applied to the whole city-territory.
- Provide advanced knowledge and a conceptual framework for the setting of more sustainable territorial and urban models with a view to planning and management environmental and urban.
- Study the main instruments and techniques for environmental analysis and assessment of the architecture, the city and the territory and its applications for planning and management in the context of strategies for sustainability.
- It also seeks to initiate the student in the economic and social value of urban environmental public goods nature and provide tools for environmental assessment of town and territory.

**Qualification system**

Brief reading controls and practices, individual and/or group, will take place during the classes, in which specific aspects of the contents will be evaluated.
End jobs or workshops, individual and/or group, will be developed to be delivered after finish of classes. Also it is considered at least 80% of class attendance.
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Bibliography

**Basic:**


Una aproximació a la valoració econòmic social del Fòrum de les Cultures Barcelona. Barcelona: Centre de Política de Sòl i Valoracions, UPC, 2004.

**Complementary:**


