Course guide
290505 - AGUA - Water and City

Unit in charge: Vallès School of Architecture
Teaching unit: 756 - THATC - Department of History and Theory of Architecture and Communication Techniques.
740 - DUTP - Department of Urbanism, Territory and Landscape.

Degree: MASTER’S DEGREE IN SUSTAINABLE INTERVENTION IN THE BUILT ENVIRONMENT (Syllabus 2014).
(Compulsory subject).

Academic year: 2023  ECTS Credits: 5.0  Languages: English

LECTURER

Coordinating lecturer: Elena Albareda

Others:

PRIOR SKILLS

No previous skills are established.

REQUIREMENTS

No previous skills are established.

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CE1. Capacity to assess and organize information related to sustainability and architecture.
CE2. Awareness of the impact that social demand for sustainability has in the architect’s fields of action (namely design, building, city and territory) and the need for the architect’s role re-definition.
CE3. Knowledge in the description of the material flows that determine urban metabolism as well as in understanding their relationship with urban spaces.

Generical:
CG1. Competence in outlining the relationship between sustainability and the urban environment on a theoretical and experimental level.
CG2. Ability to diagnose urban settings according to sustainability characterization.

Transversal:
CT3. TEAMWORK: To be able to work as a member of an interdisciplinary team, either as an associate or as a team-leader, so that projects are developed in a pragmatic and responsible manner by setting up goals fitted with the available resources.

CT4. SOLID USE OF INFORMATION RESOURCES: Proper management and acquisition, structuring, analysis and visualization of data and information in the specified knowledge field; capacity for critical assessment of results and conclusions.
CT5. (ENG) TERCERA LENGUA: Conocer una tercera lengua, preferentemente el inglés, con un nivel adecuado oral y escrito y en consonancia con las necesidades que tendrán los titulados y tituladas.

Basic:
CB6. Students will gain and understand knowledge which may be further developed or applied in a research environment.
CB10. Students will build a capacity for self-driven and autonomous learning that may empower them in further studies or education.
CB9. Students will earn skills in clear and non-ambiguous communication of their conclusions, as well as the knowledge and reasoning sustaining them, to expert and non-expert audiences.
TEACHING METHODOLOGY

MD1 Master class
MD2 Participatory exhibition class
MD3 Cooperative work

LEARNING OBJECTIVES OF THE SUBJECT

To become aware of the importance of material flows in urban metabolism until the current environmental crisis, especially through the water flow, as a paradigmatic one.
To know the basic technical and theoretical references of water management in urban metabolism along history until the current situation.
To know and reason the critical variables in the evolution of the contemporary city.
To develop research and proposals in case studies using these critical tools.
To study specifically the case of Barcelona and the incidence of water in the conformation of the city.
To defend the results of these analyzes in writing and orally.
To elaborate critical and intervention tools for the sustainable transformation of the city, and to identify opportunities for action on urban flows and spaces that allow improving urban metabolism.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours medium group</td>
<td>22.5</td>
<td>18.00</td>
</tr>
<tr>
<td>Self study</td>
<td>80.0</td>
<td>64.00</td>
</tr>
<tr>
<td>Hours large group</td>
<td>22.5</td>
<td>18.00</td>
</tr>
</tbody>
</table>

Total learning time: 125 h

CONTENTS

Presentation of course: 'What is water?'

Description:
content english

Full-or-part-time: 3h 45m
Theory classes: 1h 55m
Practical classes: 1h 50m

Water runoff in the city of the preindustrial age

Description:
-

Full-or-part-time: 3h 45m
Theory classes: 1h 55m
Practical classes: 1h 50m
Water runoff in the city of the industrial age

Description:
content english

Full-or-part-time: 3h 45m
Theory classes: 1h 55m
Practical classes: 1h 50m

Water and organic matter in organic economies

Description:
content english

Full-or-part-time: 3h 45m
Theory classes: 1h 55m
Practical classes: 1h 50m

Water and organic matter in the city of the industrial age

Description:
content english

Full-or-part-time: 3h 45m
Theory classes: 1h 55m
Practical classes: 1h 50m

Drinking water in the city of the preindustrial age

Description:
content english

Full-or-part-time: 3h 45m
Theory classes: 1h 55m
Practical classes: 1h 50m

Drinking water in the city of the industrial age

Description:
content english

Full-or-part-time: 3h 45m
Theory classes: 1h 55m
Practical classes: 1h 50m
Water and energy in organic economies

Description:
content english

**Full-or-part-time:** 3h 45m
Theory classes: 1h 50m
Practical classes: 1h 55m

Water and energy in industrial economies

Description:
content english

**Full-or-part-time:** 3h 45m
Theory classes: 1h 55m
Practical classes: 1h 50m

**title english**

Description:
Coursework

**Full-or-part-time:** 3h 45m
Theory classes: 1h 50m
Practical classes: 1h 55m

Coursework presentation

Description:
content english

**Full-or-part-time:** 3h 45m
Theory classes: 1h 55m
Practical classes: 1h 50m

**GRADING SYSTEM**

EV1 Assistance (20%) and participation in discussions in the classroom (30%)
EV2 Labour and oral presentation (50%)
BIBLIOGRAPHY

Basic:
- Dictámen prévio emitido por la subcomisión ponente designada para proponer la redacción de un proyecto de alcantarillado para Barcelona conforme a las exigencias de la higiene. Barcelona: Establecimiento Tipográfico de los Sucesores de N. Ramirez y Cª, 1886.