Course guide
310180 - 310180 - Historical, Architectural and Constructive Analysis of Existing Buildings

Last modified: 22/11/2023

Unit in charge: Barcelona School of Building Construction
Teaching unit: 756 - THATC - Department of History and Theory of Architecture and Communication Techniques.

Degree: MASTER'S DEGREE IN DIAGNOSIS AND INTERVENTION TECHNIQUES IN BUILDING CONSTRUCTION (Syllabus 2020). (Compulsory subject).

Academic year: 2023 **ECTS Credits:** 5.0 **Languages:** Spanish

LECTURER

Coordinating lecturer: Maribel Rosselló

Others: David Hernández Falagan
Clàudia Sanmartí

REQUIREMENTS

During the master the student will visit different building sites. Therefore, it is mandatory that the students have hired the compulsory and automatic insurance at the time of the enrollment. Those over 28 years of age do not have this university insurance and they must have their own insurance.

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CE1MUDITIE. To recognize the materials and the construction techniques of each historic period and to value its influence on architecture.
CE2MUDITIE. To identify the keys of the historical building's documentation processes.

Generical:
CG1MUDITIE. To apply the knowledge acquired in the complex problem's resolution in any sector of the existing building.
CG2MUDITIE. To use the tools for the research activities, as can be the data analysis and processing, as well as research techniques and methodology.

Transversal:
CT3MUDITIE. (ENG) Treball en equip. Ser capaç de treballar com a membre d'un equip interdisciplinar, ja sigui com un membre més o realitzant tasques de direcció, amb la finalitat de contribuir a desenvolupar projectes amb pragmatisme i sentit de la responsabilitat, assumint compromisos, tenint en compte els recursos disponibles.
CT4MUDITIE. (ENG) Ús solvent dels recursos de la informació. Gestionar l'adquisició, l'estructuració, l'anàlisi i la visualització de dades i informació en l'àmbit de la seva especialitat i valorar de forma crítica els resultats d'aquesta gestió.

Basic:
CB6MUDITIE. To possess and comprehend the knowledge that provides a basis or opportunity of being original on the development and/or implementation of ideas, often in an investigation context.
CB7MUDITIE. For the students to know how to apply the knowledge acquired and their problem-solving capacity in new environments or slightly familiar, within wider contexts (or multidisciplinary) related to their area of study.
CB9MUDITIE. For the students to know how to communicate their conclusions and the knowledge and underlying reasons to a specialised and a non-specialised public on a clear and concise way.
CB10MUDITI. For the students to obtain learning skills that allows them to continue studying on a mainly autonomous and self-taught way.

TEACHING METHODOLOGY

Starting from the MUDIATEC approach of proposing a common work to be carried out from the different subjects, the subject Historical, Architectural and Constructive Analysis of the Existing Building (AHACEE) is structured in two parts.
The first part is linked to the building or group of buildings object of the work with the intention of contributing knowledge of these from the documentary evidence and their architectural and constructive analysis in their historical context. In addition, it is intended to understand its evolution and transformation over time as a diagnostic tool. And, finally, provide the necessary elements for its asset valuation.
The second part of the course develops the contents that facilitate the knowledge of the existing, non-monumental architecture of our environment. Adapting, in each case, those sessions that provide specific content linked to the object of study.

LEARNING OBJECTIVES OF THE SUBJECT

Meet to rehabilitate. The course is based on this premise and works to provide tools, resources and content that allow, from the historical approach, the knowledge of the existing building that can be rehabilitated.
To document the existing buildings from different informational resources with the dual aim of understanding their evolution as a diagnostic tool and contributing the criteria of heritage valuation.
Understand the existing building in its historical, territorial, architectural and constructive context.
Provide a body of knowledge about existing non-monumental traditional architecture
To facilitate the knowledge of the architecture realized within the logic of the industrialization and the constructive systematization. So much from its conformation, its formal and constructive characteristics and the techniques of coatings and finishes.

STUDY LOAD

Type	Hours	Percentage
Hours medium group	5,0	4.00
Hours large group	15,0	12.00
Hours small group	5,0	4.00
Guided activities	10,0	8.00
Self study	90,0	72.00

Total learning time: 125 h

CONTENTS

1. Tools and resources for historical and documentary study

Description:
Search for graphic, photographic, cartographic and written documentation that provides qualitative information for the understanding of the building.

Specific objectives:
Document the building, understand its transformations and be able to propose an evolution, if it's appropriate.

Full-or-part-time: 6h
Theory classes: 3h
Practical classes: 3h

3. Historical, architectural and constructive analysis of existing traditional buildings.

Description:
Study of the existing architecture made from preindustrial constructive logics
Houses and other buildings
Residential architecture linked to the cultural context. Architectural and constructive characteristics.
House based on physical and geographical conditions
House in urban centers.
Construction systems: construction techniques in stone, wood, earth, lime, plaster and iron (structural and finishing).

Specific objectives:
Provide knowledge about these architectures as a fundamental basis for the diagnosis and heritage valoration

Full-or-part-time: 6h
Theory classes: 3h
Practical classes: 3h

3. Historical, architectural and constructive analysis of contemporary buildings. Towards constructive and structural systematization

Description:
Towards rationalization in the 18th century
Constructive systematization of the 19th century
Modernity and tradition in the first third of the 20th century
Regression and persistence of referents in the post-war years

Specific objectives:
Aportar conocimiento sobre estas arquitecturas como base fundamental para el diagnóstico y la valoración patrimonial

Full-or-part-time: 11h
Theory classes: 7h 30m
Practical classes: 3h 30m

4. Coatings and finishes in existing contemporary architecture

Description:
Facade cladding
Interior coatings: ceilings, walls and floors

Specific objectives:
Provide knowledge about these finishes as a fundamental basis for the diagnosis and valuation of assets

Full-or-part-time: 8h
Theory classes: 8h

Follow up course work

Description:
content english

Full-or-part-time: 10h
Practical classes: 10h

GRADING SYSTEM

30% Course work shared with the other subjects. Work in group
30% Follow-up of the course and related activities
40% Individual exercises linked to the subject taught

BIBLIOGRAPHY

Basic:
- Rosselló i Nicolau, Maribel. L'Interior a Barcelona en el segle XIX [on line]. Barcelona: Universitat Politècnica de Catalunya, 2005 [Consultation: 16/04/2020]. Available on: http://hdl.handle.net/10803/6088.
- Corredor-Matheos, José; Isern, Jordi; Montaner, Josep Maria. Arquitectura industrial a Catalunya : del 1732 al 1929. [Barcelona]: C.G. Creaciones Gráficas, 1981. ISBN 8485332075.
- Menicali, Umberto. I Materiali dell'Edilizia Storica : tecnologia e impiego dei material tradizionali. Roma: Nuova Italia Scientifica, 1992.
- Paricio Casademunt, Antoni. Secrets d'un sistema constructiu: l'Eixample [on line]. 2a ed. rev. Barcelona: Edicions UPC, 2008 [Consultation: 16/04/2020]. Available on: http://hdl.handle.net/2099.3/36310.
- Rosselló i Nicolau, Maribel; Hereu i Payet, Pere; Oliveras Samitier, Jordi; Paricio Casademunt, Antoni; Rodríguez, Carmen; Serra Santasusagna, Joan. El Teixit residencial en la formació de la metròpolis moderna : el cas de Barcelona (1840-1936). Barcelona: Universitat Politécnica de Catalunya, BarcelonaTech, 2013. ISBN 9788498804454.
- Iglesias Acero, Fernando. Restauració de façanes històriques. [Barcelona]: Col·legi d'Arquitectes de Catalunya, 2006. ISBN 8496185842.
- Ferrer i Aixalà, Amador. Els Polígons de Barcelona : l'habitatge massiu i la formació de l'àrea metropolitana. Barcelona: Edicions UPC, 1996. ISBN 8483011409.

Complementary:
- Manias, Maurizio; Atzeni, Carlo; Mura, Gianni; Serra, Franceschino; Casanovas i Boixereu, Xavier. Architetture delle colline e degli altipiani centro-meridionali : Marmilla, Trexenta, Sarcidano, Siurgus, Gerrei, Marghine, Planargia, Barigadu, Montiferru, Guilcer. [Roma]: Dei - Tipografia del genio civile, cop. 2009. ISBN 9788849668018.
- Curós i Vila, Joan; Navés Viñas, Francesc. Arquitectura rural de Catalunya : metodologia d'anàlisi i d'intervenció. Barcelona: Universitat Politècnica de Catalunya, 2003.