

Course guide

310421 - 310421 - Built Heritage: Management and Alternatives

Last modified: 27/07/2023

Unit in charge: Barcelona School of Building Construction
Teaching unit: 753 - TA - Department of Architectural Technology.

Degree: MASTER'S DEGREE IN ADVANCED BUILDING CONSTRUCTION (Syllabus 2014). (Optional subject).

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

LECTURER

Coordinating lecturer: Ruiz Gandullo, Javier

Others: Ruiz Gandullo, Javier

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

CE1. Capacity of innovation: identify the reasons and the mechanisms of the technologic and technical changes.

CE11. Design and measure reinforcements of structural elements.

CE12. Define the characteristics of the seismic action and apply the present regulations to the seismic calculation of structures in building construction.

Generical:

CG1. Provide to the student the capacity to apply the knowledge acquired in the resolution of complex problems in any sector of the building construction.

CG5. Analyse, evaluate and synthesise critically, new and difficult ideas of promotion, in academic and professional contexts, scientific advances, technologies, social or cultural in the society of knowledge.

Transversal:

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:

CB7. The students must be able to apply the acquired knowledges and their ability of resolution of problems in new or little known environments inside more wide environments (or multidisciplinary) related with their study field.

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.

TEACHING METHODOLOGY

MasterMaster class.

Participatory expository class.

Practices.

LEARNING OBJECTIVES OF THE SUBJECT

By the end of the course the student must be able to:

- Identify a problem under durability criteria.
- Analyze the environmental conditions that affect the global conservation of building models.
- Establish effective dynamic response methods on the real estate sector.
- Demonstrate the goodness of the application of innovative proposals.

STUDY LOAD

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

Total learning time: 125 h

CONTENTS

TOPIC 1. CONSERVATION CRITERIA

Description:

Description and analysis of the real estate asset.
Estimated useful life of the systems that make up the building.
Estimated weighting of the system as a whole.
Study of regulatory requirements based on construction periods.

Specific objectives:

Analysis of the estimated useful life of the systems that make up the building.

Related activities:

Theoretical classes.
Activity 1: Comparative study of estimated useful life.

Full-or-part-time: 60h

Theory classes: 4h
Practical classes: 4h
Guided activities: 7h
Self study : 45h

UNIT 2. MODELS OF REGENERATION OF THE BUILT-IN PARK

Description:

Determination of models that meet current regulatory requirements.
Estimation of the useful life of the proposed models.
Update of the estimated weighting of the system as a whole.
Evaluation of the technical and functional improvements achieved.

Specific objectives:

Evaluate regeneration improvements in existing buildings.

Related activities:

Theoretical classes.
Activity 2: Proposals for technical and functional improvement of the built park.

Full-or-part-time: 60h

Theory classes: 4h
Practical classes: 4h
Guided activities: 7h
Self study : 45h

GRADING SYSTEM

The evaluation of the subject will be based on two blocks of activities and the final defense of the global work:

Activity 1: 40%

Activity 2: 40%

Defense work: 20%

BIBLIOGRAPHY

Basic:

- AENOR. UNE-EN 15331: Criterios para el diseño, la gestión y el control de servicios de mantenimiento de edificios. Madrid: Asociación Española de Normalización y Certificación, 2012.
- AENOR. UNE-EN 60706-2: Mantenibilidad. Parte 2: Requisitos y estudios de mantenibilidad durante la fase de diseño y desarrollo. Madrid: Asociación Española de Normalización y Certificación, 2009.
- Navarro Elola, Luis; Pastor Tejedor, Ana Clara; Mugaburu Lacabrera, Jaime Miguel. Gestión integral de mantenimiento. Barcelona: Marcombo, 1997. ISBN 8426711219.
- Gibert, V.; Royano, V.; Pascual, J.; Avellaneda, A.; Lucea, J.. Mantenimiento de edificios 1. Barcelona: Escola Politècnica Superior d'Edificació de Barcelona, 2009.
- Feingold, Víctor; Gisbert, Marisa; Chardon, Enrique. El Libro del facility management. Buenos Aires: Sociedad Latinoamericana de Facility Management, 2012. ISBN 9789872780500.
- AENOR. UNE-EN 13460: Mantenimiento. Documentos para el mantenimiento. Madrid: Asociación Española de Normalización y Certificación, 2009.
- AENOR. UNE-EN 15221: Gestión de Inmuebles y Servicios de Soporte. Madrid: Asociación Española de Normalización y Certificación, 2012.
- AENOR. UNE-EN 13306: Mantenimiento. Terminología de mantenimiento. Madrid: Asociación Española de Normalización y Certificación, 2011.
- Boucly, François. Gestión del mantenimiento. Madrid: AENOR, 1999. ISBN 8481431605.