

Course guide

310739 - 310739 - Workshop 7: Rehabilitation

Last modified: 25/01/2024

Unit in charge:	Barcelona School of Building Construction	
Teaching unit:	732 - OE - Department of Management. 753 - TA - Department of Architectural Technology. 752 - RA - Departamento de Representación Arquitectónica. 751 - DECA - Department of Civil and Environmental Engineering. 756 - THATC - Department of History and Theory of Architecture and Communication Techniques.	
Degree:	BACHELOR'S DEGREE IN ARCHITECTURAL TECHNOLOGY AND BUILDING CONSTRUCTION (Syllabus 2019). (Compulsory subject).	
Academic year: 2023	ECTS Credits: 7.5	Languages: Catalan, Spanish

LECTURER

Coordinating lecturer:	Olona Casas, Joan
Others:	Olona Casas, Joan Bosch Prat, Mireia Agustiño Otero, Manuel Hernanz Hernanz, Justo Palmero, Maria Fabiana Pavón, Susana Rosell, Joan Ramon Esquinas Dessy, Jesús Baringo Sabater, Pedro Hernández Falagán, David Taltavull, Antoni

PRIOR SKILLS

Knowledge of architectural technologies, representation systems, economic valuations, pathologies and diagnosis.

TEACHING METHODOLOGY

The directed learning hours consist of:

- Theoretical classes (large group) in which the teacher makes a presentation to introduce the general learning objectives related to the basic concepts of the subject. It also promotes the involvement of students in their learning, interspersing questions and / or practical exercises, motivating active participation in the classroom. Support material that is available to students through ATENEA is used: course programming, PDF presentations of the PowerPoint files projected in class and recommended bibliography.
- Practical classes (medium group) in which students work in groups of between 3 and 5 members by solving exercises related to the specific learning objectives of each of the contents of the subject. In these works, the transversal competence of Sustainability, Circular Economy and Social Commitment is applied by incorporating these concepts into their subject matter.
- Autonomous learning is limited to assimilating and internalizing the topics of theoretical classes and recommended readings, as well as research and the use of computer applications related to the rehabilitation of buildings.

LEARNING OBJECTIVES OF THE SUBJECT

Ending of the workshop, students should be able to:

- Analyze the strategic approach of action within a rehabilitation program.
- Evaluate which computer tools available in the sector fit the needs of the project.
- Identify which documents should be part of a basic rehabilitation project and how the client's needs are contemplated.
- Prepare the technical sections that formalize an executive rehabilitation project from a pr

STUDY LOAD

Type	Hours	Percentage
Self study	112,5	60.00
Hours small group	75,0	40.00

Total learning time: 187.5 h

CONTENTS

UNIT 1: PROJECT ANALYSIS AND APPROACH

Description:

This block works:

- The architectural features that are recurrent in the buildings.
- The necessary tools for the management of the information of a project.
- The content of the rehabilitation project to be developed.

Specific objectives:

Clasificar las variables más significativas de un modelo arquitectónico.
Determinar las singularidades del perfil de cliente residente en el edificio.
Estructurar los subsistemas y elementos que forman parte del edificio.
Escoger una herramienta con capacidad de gestión de la información.

Related activities:

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Theoretical explanation classes.

Development of Group Work 1: Needs of a rehabilitation project. Analysis of the proposals of the other groups.

Self-defense of Group Project 1: This part will contribute to the defense of the final work, together with the rest of the parts.

Full-or-part-time: 50h

Theory classes: 8h

Practical classes: 12h

Self study : 30h

UNIT 2: BASIC PROJECT

Description:

This block works:

- The adequacy needs of a rehabilitation project according to the regulatory technical requirements and the client's requirements.
- The structure of a basic project and the documents that comprise it.
- The documents that complement and justify the project.

Specific objectives:

Assess subsystems susceptible to rehabilitation need.

Prepare the regulatory documents that must be included in a basic project.

Prepare the supporting documents to be included in an executive project.

Related activities:

Theoretical explanation classes.

Development of Work 2 in group: Approach of a basic and executive project.

Self-defense of Group Project 2: This part will contribute to the defense of the final work, together with the rest of the parts.

Full-or-part-time: 77h

Theory classes: 10h

Practical classes: 15h

Self study : 52h

UNIT 3: DETAILED PROJECT & CONSTRUCTION DETAILS

Description:

This block works:

- The forms of detailed graphic representation of an intervention following its execution model.
- The auxiliary tools and machines of safety and prevention and the economic costs linked to the proposed intervention.
- The repercussion of executing the intervention

Specific objectives:

Determine the chronological phases of execution within a constructive detail.

Graphically represent the different phases of the intervention with the necessary auxiliary means.

Formalize a summary document where it appears: the graphic representation, the budget, the necessary auxiliary means and the environmental impact.

Related activities:

Theoretical explanation classes.

Development of Work 3 individually: Realization of constructive details.

Writing of the report and details of the individual work.

Full-or-part-time: 87h

Theory classes: 45h

Practical classes: 20h

Self study : 22h

GRADING SYSTEM

The final grade (Qf) is the sum of the following partial qualifications of the delivery and partial defense of the basic project and the work of the individual executive project.

$Q_f (100\%) = \text{Basic project (50\% of which the project represents 30\% and the defense 20\%)} + \text{Executive project (50\%)}$



EXAMINATION RULES.

Continuous evaluation: If any of the training activities is not carried out, this will be considered as not scored and not recoverable. The delivery of the practices of the basic project is an indispensable condition to be able to be evaluated of the basic project. If any of the practices is not delivered, the basic project part will not be evaluable. This subject does not have a repeat assessment exam.

BIBLIOGRAPHY

Basic:

- Vegas, Fernando. Mileto, Camilla. Un manual de restauración de la arquitectura tradicional de la Comunidad Valenciana . 1ª. Valencia: Colegio Oficial de Arquitectos de la Comunidad Valenciana, 2011. ISBN 978-84-86828-93-6.
- Genescà Ramon, Josep M; Rosell, Joan Ramon; Gibert Armengol, Vicente. Recomanacions per al reconeixement i la diagnosi d'estructures porticades de formigó armat que suporten estructures de fàbrica de maó [on line]. Barcelona: ITEC : Generalitat de Catalunya. Direcció General d'Arquitectura i Habitatge, 1999 [Consultation: 21/07/2020]. Available on: <https://cutt.ly/WaLeJvB>. ISBN 8478533575.
- Serrano Lanzarote, Begoña. DTIE 18.01 : rehabilitación energética de la envolvente térmica de los edificios. Madrid: ATECYR, [2013]. ISBN 9788495010490.
- Beinhauer, Peter. Atlas de detalles constructivos : con más de 400 ejemplos. Barcelona: Gustavo Gili, cop. 2006. ISBN 8425220572.
- Fiol Femenia, Francisco. Manual de patología y rehabilitación de edificios [on line]. Burgos: Universidad de Burgos, cop. 2014 [Consultation: 24/07/2020]. Available on: <https://lectura.unebook.es/viewer/9788492681792>. ISBN 9788492681785.
- Bellmunt i Ribas, Rafael; Genescà Ramon, Josep M; Gibert Armengol, Vicente. Guia d'actuacions en sostres existents de biguetes de formigó armat o precomprimit [on line]. Barcelona: Institut de Tecnologia de la Construcció de Catalunya : Direcció General d'Arquitectura i Habitatge, 1996 [Consultation: 21/07/2020]. Available on: <https://cutt.ly/raLt9Mf>. ISBN 8478533052.

Complementary:

- RITE : reglamento de instalaciones térmicas en los edificios : e instrucciones técnicas complementarias. Madrid: Ministerio de Ciencia y Tecnología, DL 2004. ISBN 8474749603.
- Castell, Vicente; Farré Oro, Bernabé; Regalado Tesoro, Florentino. Biblioteca de detalles constructivos metálicos, de hormigón y mixtos en estructuras de edificación : 600 detalles constructivos de estructuras metálicas, mixtas y de hormigón armado, adaptados a la instrucción EHE. 4ª ed. Alicante: CYPE, DL 2004. ISBN 8493367508.
- Carrasco, Emilio. REBT: reglamento electrotécnico para baja tensión e instrucciones técnicas complementarias (ITC) BT01 a BT52 : Real Decreto 842/2002 (actualizado con el RD 1053/2014), índice analítico de términos más utilizados. Madrid: Tébar Flores, cop. 2015. ISBN 9788473605274.

RESOURCES

Hyperlink:

- Manuals Diagnosi Itec. <https://itec.es/servicios/librospdf/>- Código Técnico de la Edificación (CTE). <https://www.codigotecnico.org/index.php/menu-documentoscte.html>