

## Course guide

### 210523 - RTFG - Retrofitting: Architecture, Energy and Health

Last modified: 14/12/2023

**Unit in charge:** Barcelona School of Architecture  
**Teaching unit:** 735 - PA - Department of Architectural Design.  
**Degree:** MASTER'S DEGREE IN ARCHITECTURE (Syllabus 2015). (Optional subject).  
**Academic year:** 2023    **ECTS Credits:** 5.0    **Languages:** Catalan, Spanish

#### LECTURER

**Coordinating lecturer:** EVA CRESPO SÁNCHEZ - JORDI ADELL ROIG - CÒSSIMA CORNADÓ BARDÓN

**Others:** Segon quadrimestre:  
JORDI ADELL ROIG - Grup: M2  
CÒSSIMA CORNADÓ BARDÓN - Grup: M2  
EVA CRESPO SÁNCHEZ - Grup: M2

#### REQUIREMENTS

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#### TEACHING METHODOLOGY

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#### LEARNING OBJECTIVES OF THE SUBJECT

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#### STUDY LOAD

Type	Hours	Percentage
Hours large group	30,0	24.00
Hours small group	15,0	12.00
Self study	80,0	64.00

**Total learning time:** 125 h



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**Description:**

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**Specific objectives:**

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**Full-or-part-time:** 33h 20m

Theory classes: 6h 40m

Laboratory classes: 20h

Guided activities: 6h 40m

## GRADING SYSTEM

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**Continuous assessment**

Continuous assessment will be based on the work carried out by the student during the academic year, through the submission of assignments or the performance of written and/or oral tests, according to the criteria and timetable established.

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**Final assessment**

If the continuous assessment is not positive, a second assessment may be carried out, which will consist of a final overall test in the established methodology according to the criteria of the lecturer in charge (written or oral test and/or submission of assignments).

**Telematic continuous assessment**

In online teaching situations, continuous assessment will be carried out synchronously and asynchronously, by the methods established by the University and the School, with a periodic record of academic activity by submitting assignments, forums, questionnaires or any other means provided by the Atenea platform, or the alternative tools provided to the teaching staff. In situations in which this telematic teaching takes place when face-to-face teaching has already begun, or for non-academic reasons, any alterations to the weightings or regular teaching control systems will be communicated in detail to all students on the Atenea platform for every subject.

**Final telematic assessment**

If the continuous telematic assessment is not positive, a second assessment may be carried out consisting of a final overall test in telematic format to be established in accordance with the criteria of the lecturers in charge and the ICT resources and tools provided by the University or the School.

The measures for adapting to distance teaching will be implemented in accordance with ICT security and personal data protection criteria to ensure compliance as regards Personal Data Protection legislation (RGPD and LOPDGD).

## BIBLIOGRAPHY

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**Basic:**

- Torgal, Fernando Pacheco. Cost-effective energy-efficient building retrofitting : materials, technologies, optimization and case studies. 1st edition. Cambridge, Massachusetts: Woodhead Publishing, 2017. ISBN 0081012276.

- Capdevila, Ivan. Rehabilitació energètica d'edificis [on line]. 1a edició. Barcelona: Generalitat de Catalunya. Institut Català d'Energia, octubre de 2016 [Consultation: 07/07/2022]. Available on: [https://icaen.gencat.cat/web/.content/10\\_ICAEN/17\\_publicacions\\_informes/04\\_coleccio\\_QuadernPractic/quadern\\_practic/arxiu/10\\_rehabilitacio\\_edificis.pdf](https://icaen.gencat.cat/web/.content/10_ICAEN/17_publicacions_informes/04_coleccio_QuadernPractic/quadern_practic/arxiu/10_rehabilitacio_edificis.pdf).



**Complementary:**

- Ravetllat, J.; Díaz, C; Cornadó, C.; Vima, S.. La millora de les condicions d'habitabilitat en els grans conjunts residencials de l'Àrea Metropolitana de Barcelona [on line]. Iniciativa Digital Politècnica. Oficina de Publicacions Acadèmiques Digitals de la UPC, 2019 Available on: <https://upcommons.upc.edu/handle/2117/178642>.
- CAATEEB. AA.VV. Col·lecció Manuals de diagnosi [on line]. CAATEEB. [Consultation: 07/07/2022]. Available on: [https://www.apabcn.cat/ca\\_es/serveicolegiat/cdoc/bdigital/Pagines/manuals-diagnosi.aspx](https://www.apabcn.cat/ca_es/serveicolegiat/cdoc/bdigital/Pagines/manuals-diagnosi.aspx).
- Voss, K.; Musall, Eike. Net zero energy buildings : international projects of carbon neutrality in buildings. Germany?: EnOB, 2013. ISBN 9783920034805.
- EC EUROPE. AAVV. Handbook on Sustainable and Circular re-use of spaces and buildings. Urban Agenda for the EU. 2nd Edition. Woodrow Clark, 2017. ISBN 9780128139646.

## RESOURCES

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**Other resources:**

go to the Catalan or Spanish version