Course guide
210774 - PM - Design and Materiality

Last modified: 14/12/2023

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

Degree: MASTER'S DEGREE IN ADVANCED STUDIES IN ARCHITECTURE-BARCELONA (Syllabus 2015). (Optional subject).
MASTER'S DEGREE IN ARCHITECTURE (Syllabus 2015). (Optional subject).

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

LECTURER

Coordinating lecturer: MARTA BADIA TORRENTS

Others: Segon quadrimestre:
MARTA BADIA TORRENTS - Grup: CP2
MARTA DOMÈNECH RODRÍGUEZ - Grup: CP2
OLGA FELIP ORDIS - Grup: CP2
MARIA DEL PILAR GIRALDO FORERO - Grup: CP2

TEACHING METHODOLOGY

Go to Spanish or Catalan version

LEARNING OBJECTIVES OF THE SUBJECT

Go to Spanish or Catalan version

STUDY LOAD

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

Total learning time: 125 h

CONTENTS

title english

Description:
The subject Materiality and Project studies and analyzes architectonical issues influenced by building technology and materiality.

The following content will be developed:

- Low Hard- High Soft. Low technology concept understood as the sustainability of the materials used and the new design and production tools.
- The materials and technologies in the contemporary Architecture.
- The architecture shapes and the "buildability" of them
- The modern trends of industrial construction; the advanced craftsman, the new tools like NCS, the 3D elements off site and the joint of them on site.
- The skins of the architecture and their performances but also the appearance and their capacity of spread emotions
- The structure like organizer of the architectural spaces.

This course will be explained in several thematic lectures integrating the theory, the practical cases and the discussion. In many lectures will take part the principal professors of the course but also guest lecturers. One or two visits to interesting buildings of Barcelona will be organised

Specific objectives:
This course explores the relationship between the building technology and the project process, choosing and analyzing subjects on architecture which are very influenced by technological and contemporary concepts.

More in-depth analysis of technology as a design tool as well as his capacity to generate and express architecture.

At the end of the course, the student must be able to interrelate technology and project, improving his design skills. The student will have acquired basic research knowledge in the technology and building materials field

Full-or-part-time: 125h
Theory classes: 15h
Laboratory classes: 30h
Self study : 80h

GRADING SYSTEM

Continuous evaluation (%) Final evaluation(%)
SE02 Oral presentations 25 25
SE03 Works and reports 50 50
SE05 Continuous evaluation 25 25

The course is organized as a seminar and workshop. A minimum of 80% attendance at classes is required
The students will develop along the semester a research and propositive work which will be presented by them in a public exposition.

Continuous telematic evaluation
In online teaching situations, continuous assessment will be carried out synchronously and asynchronously by the means established by the University and the School, with a periodic record of academic activity through submissions, forums, questionnaires or any other means facilitated by the Atenea platform, or the alternatives provided to the teaching staff. In the situations in which this telematic teaching is a product of face-to-face teaching that has already begun, or for questions of extra-academic order, the changes in the weightings or regular control systems of the teaching will be communicated in detail to all students by the Athena of each subject.

Telematic final evaluation
If the continuous telematic evaluation is not positive, a second evaluation can be carried out, which will consist of a final test of a global nature in telematic format that will be established in accordance with the criteria of the professor responsible and the media and ICTs provided by the University or School.

The measures for adaptation to non-classroom teaching will be implemented in accordance with the criteria of ICT security and personal data protection to ensure compliance with the legislation on Personal Data Protection (RGPD and LOPDGDD)

BIBLIOGRAPHY

Basic:
- Herzog, T.; Krippner, R.; Lang, W. Facade construction manual [on line]. Basel, etc.: Detail, 2004 [Consultation: 12/05/2020]. Available on: https://doi.org/10.11129/detail.9783034614566. ISBN 3764371099.
- Fernández, J. Material architecture : emergent materials for innovative buildings and ecological construction. Oxford: Architectural Press, 2006. ISBN 0750664975.
- Dunn N. Digital fabrication in architecture. London: Laurence King Publishing, 2012. ISBN 978-1856698917.
- Stacey, M. Component design. Oxford: Architectural Press, 2001. ISBN 9780750609135.
- Gordon J.E. Structures et matériaux: l'explication mécanique des formes. S.l.: Pour la Science, 1994. ISBN 9782902918829.