

## Course guide

# 210758 - TCEIA - Advanced Technology for the Construction of the Interior Space in Architecture

Last modified: 16/07/2024

<b>Unit in charge:</b>	Barcelona School of Architecture	
<b>Teaching unit:</b>	753 - TA - Department of Architectural Technology.	
<b>Degree:</b>	MASTER'S DEGREE IN ADVANCED STUDIES IN ARCHITECTURE-BARCELONA (Syllabus 2015). (Optional subject).	
<b>Academic year:</b> 2024	<b>ECTS Credits:</b> 5.0	<b>Languages:</b> English

## LECTURER

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<b>Coordinating lecturer:</b>	MARTA BADIA TORRENTS
<b>Others:</b>	Segon quadrimestre: MARTA BADIA TORRENTS - ITA2

## PRIOR SKILLS

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Students who take this course should have basic knowledge in the techniques of construction and refurbishment of the interior architecture.

## REQUIREMENTS

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This course has no prerequisites from master's level

## TEACHING METHODOLOGY

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Presentation Method / Master Class  
Participatory class  
Self work  
Problem-based learning  
Case study  
Tutoring

## LEARNING OBJECTIVES OF THE SUBJECT

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- Be able to:
- Applying resources to critical analysis of the progress of technology architecture in new materials, techniques and building systems, and environmental conditioning.
  - Implement the new knowledge in the field of research and professional advanced architectural technology
  - Deepen knowledge related to technological innovation, particularly in sustainable construction in the industrialization of construction, environmental conditioning systems of buildings, and digital techniques of design and production material.

## STUDY LOAD

Type	Hours	Percentage
Self study	87,5	70.00
Hours large group	37,5	30.00

**Total learning time:** 125 h

## CONTENTS

### title english

#### Description:

1. Diachronic evolution of architectural interior space technology, recognizing vectors evolution.
2. Descriptive analysis of the advanced technical requirements that currently exist in the paving and screeds: recognition in real buildings in operation
3. Descriptive analysis of the new techniques that are currently applied on floors and screeds: recognition by benchmarking
4. Descriptive analysis of commissioning new work processes currently applied on floors and screeds: recognition in real works
5. Descriptive analysis of the advanced technical requirements that currently exist in the walls and interior partitions: recognition in real buildings in operation
6. Descriptive analysis of the new techniques that are currently applied on interior walls and partitions: recognition by benchmarking
7. Descriptive analysis of commissioning new work processes currently applied on interior walls and partitions: recognition in real works
8. Descriptive analysis of the advanced technical requirements that currently exist in suspended ceilings: recognition in real buildings in operation
9. Descriptive analysis of new techniques currently applied in false ceilings: recognition by benchmarking
10. Descriptive analysis of commissioning new work processes currently applied in false ceilings: recognition in real works
11. Detection current development opportunities in architectural innovation applied indoors
12. Development of proposals for innovation and comparative assessment of their suitability
13. Preparation and publication of communication supports innovation proposals
14. Technical innovation proposals before juries and specialized audiences

#### Specific objectives:

1. Advanced knowledge of the technical, formal and informal demands, which currently pose the interior spaces of architecture.
2. Understanding of advanced process implementing own construction work and refurbishment of the interior architecture
3. Understanding phenomena advanced aging behavior and actual construction elements and conditioning the interior space of architecture
4. Critical knowledge of new construction technologies and packaging that can be applied soon in the projects of interior architecture.
5. Training to address its technical innovation and product development, applied to interior architecture

#### Full-or-part-time: 125h

Theory classes: 15h

Laboratory classes: 30h

Self study : 80h



## GRADING SYSTEM

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### Evaluation system

Continuous assessment throughout the course in successive assessment activities, consisting of:

- WORK STUDY, INDIVIDUAL COOPERATIVE regime. Each student joins a team of 3 people and develops a planned three roles (observation, product, work). This role requires the public to submit a job every 3 weeks (involving quantitative assessment of the performance in the final score is 75%).

- Development team (3 people). Each team will present to the public:

- a book or/and
- A material or process innovation or/and
- The results of a measurement campaign

(Involving quantitative assessment of this final assessment of the performance is 25%)

- Attendance at conferences and visits is mandatory and will be made, whenever possible, within hours of the course. (Involving quantitative assessment of this can weight the final assessment till 10%)

### Continuous assessment:

Continuous assessment will be carried out on the basis of the work to develop by the student during the course through the delivery of jobs or the realization of written or/and oral tests, according to the criteria and timetable to be established.

### Final assessment:

If the results of the continuous assessment are not positive, it will be possible to perform a second evaluation which will consist in a global final test that can consist in a written or oral exam or the delivery of jobs, in accordance with the criterion of the responsible teachers. To pass the course is essential for students to be presented to all the assessment tests.

## BIBLIOGRAPHY

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### Basic:

- Interior spaces: space, light, materials [on line]. Munchen; Basel, etc: Detail; Birkhäuser, 2002 [Consultation: 11/05/2020]. Available on: <https://doi.org/10.11129/detail.9783034615129> (Accés restringit a usuaris UPC). ISBN 3764366303.
- Nutsch, W. Manual de construcción: detalles de interiorismo. Barcelona: Gustavo Gili, 2006. ISBN 9788425220586.
- Kilmer, W. O. Construction drawings and details for interiors: basic skills. New York: John Wiley & Sons, 2003. ISBN 0471109533.
- Ritter, A. Smart materials: in architecture, interior architecture and design [on line]. Basel: Birkhäuser, 2007 [Consultation: 10/03/2022]. Available on: <https://www-degruyter-com.recursos.biblioteca.upc.edu/document/doi/10.1007/978-3-7643-8227-8/html>. ISBN 9783764373276.

### Complementary:

- Código Técnico de la Edificación. 6ª ed. act. Madrid: Tecnos, 2014. ISBN 9788430961399.
- AENOR Normas de producto.

## RESOURCES

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### Hyperlink:

- Intranet Docent. <https://atenea.upc.edu/moodle/login/index>