Course guide
290139 - AULAARQ - Aulaarq: Architecture Auscultation

Last modified: 05/02/2025

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

Degree: DEGREE IN ARCHITECTURE STUDIES (Syllabus 2014). (Optional subject).

Academic year: 2024 **ECTS Credits:** 3.0 **Languages:** Catalan

LECTURER

Coordinating lecturer: Zamora Mestre, Joan Lluis

Others: Muntané Raich, Oriol

PRIOR SKILLS

The student must have passed the first two years of the curriculum in order to:
- know the construction elements and their vocabulary
- write a report with alphanumeric and graphic content
- know the building materials and their properties

REQUIREMENTS

There is none.

TEACHING METHODOLOGY

In the weekly theoretical session, a real case of inspection, analysis and diagnosis of a building anomaly will be presented.
In the same session, the resources available at ATENEA to resolve a similar case will be presented.
The students, distributed in stable groups of 3 people, will go to the ETSAV Library and choose on loan the available device that they consider most useful to inspect the assigned ETSAV premises throughout the course. The following week they will submit the corresponding report to Atenea.

LEARNING OBJECTIVES OF THE SUBJECT

This course aims to train the student in architecture instrumental techniques laptops that will allow understanding the behavior of real buildings. These techniques provide insight and quantify some of the main technical parameters that affect a building, its elements and materials (insulation, waterproofing, resistance, etc.). The teaching method is experimental and consists of a series of laboratory and field activities that form an introduction to experimentation in architecture, containing a special focus on technology to architecture. This proposal is aimed at teaching the students of architecture to improve their professional skills acquired their academic knowledge, abilities, skills, attitudes and values in the experimental environment that allows you to take better decisions in the field of technology architecture.

CONTENTS

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Description:
1 Introduction
2 Bibliographic Research. Design of an experiment.
3 Basics and applications of Thermography
4 Basics and applications of Endoscopy and Digital Microscopy
5 Basics and applications of Hygrometry of materials
6 Basics and applications of Colorimetry and Brillometry
7 Conference
8 Determination of sound in buildings. Use of sound meters.
9 Impact of air conditioning in buildings: Psychrometry and ambient thermohygrometry.
10 Quality of construction elements: ultrasound.
11 Study of natural radiation. Quantity and quality of light.
12 Visit
13 Conclusion

Specific objectives:
- Ability to recognize the condition of buildings
- Ability to use portable instrumental techniques
- Ability to write technical notes

Related activities:
Planning a recognition campaign
Choose the instrument from those available in the ETSAV library
Development of the campaign
Preparation and editing of the campaign report

Full-or-part-time: 72h
Practical classes: 42h
Laboratory classes: 30h

GRADING SYSTEM

10 Practical exercises delivered in each session (90%)
Attendance at extraordinary sessions (conferences, visits, videos, etc.) (10%)

RESOURCES

Other resources:
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