



COURSE DESCRIPTION EXECUTIVE DESIGN OF ARCHITECTURE

SSD: TECNOLOGIA DELL'ARCHITETTURA (ICAR/12)

DEGREE PROGRAMME: ARCHITETTURA (N14)
ACADEMIC YEAR 2022/2023

COURSE DESCRIPTION

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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: 07142 - LABORATORIO DI SINTESI FINALE
MODULE: 09280 - PROGETTAZIONE ESECUTIVA DELL'ARCHITETTURA
CHANNEL: 01 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: V
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 4

REQUIRED PRELIMINARY COURSES

Laboratorio di Composizione Architettonica e Urbana 4, Tecnologia dei sistemi costruttivi, Laboratorio di Urbanistica, Scienza delle costruzioni, Fisica Tecnica Ambientale.

PREREQUISITES

none

LEARNING GOALS

The aims of the course is to introduce the student towards a methodological path capable of governing the design process that goes from the concept to the correct execution of building works. The main objective is to bring out the relationships between design, production and standard, focusing on products, systems and materials and on the logic for their choice and assembly in compliance with current requirements.

The course aims at deepening cultural and operational aspects of the architectural object, focusing on the phases of the design and executive process and on the tools by which the architect can

manage the consistency between the design idea and the technical solutions adopted. The student will then be directed to choose from the repertoire of 'possible' technical solutions the most appropriate ones to the specific context (environmental, production, regulatory,..).

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

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The course provides students with knowledge and basic methodological tools needed to understand the transformation process from the design idea to the realization of the architectural work. The student needs to show ability to know and understand problems related to methods and analysis tools will be studied for the knowledge of the context in which we operate, and on the other innovative systems, technologies and products in line with urgent environmental demands. The student must demonstrate the ability to insert and manage the technological data within a broader interdisciplinary comparison, in line with the training objectives of the synthesis laboratory.

Applying knowledge and understanding

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The students need to show ability to infer decision and consequences from available information to technical-constructive solutions capable of guaranteeing performance levels consistent with the broader objectives of the project, especially in satisfying environmental requirements. They must recognize technological innovation to contribute to a design definition capable of offering the most favorable relationship between use of resources and services offered.

The students must be able to interpret and solve the problems relating to the sequence and methods of installation in the definition of construction details

COURSE CONTENT/SYLLABUS

In accordance with the other integrated course, students will develop the design exercise on the agreed theme of the year, deepening the aspects that link the technical-executive choices to the current demand in an era of energy transition and climate change. In the teaching activity, the learner will be accompanied to the application of support tools and design verification, up to the elaboration of the technical detail. Depending on the different phases of the project and in relation to the specificity of the context, the following topics will be studied in depth, among others: the question of technique in the design of contemporary architecture; 2030 Agenda and European Green Deal. Objectives, strategies, criteria and environmental protocols, CAM; Materials, components, construction techniques: criteria for choosing technical solutions; Building envelope, requirements and performance; integration of components and systems for the production of energy from renewable sources; solutions for water recovery, waste disposal, cooling and natural ventilation.

READINGS/BIBLIOGRAPHY

Marisa Bertoldini, Andrea Campioli, *Cultura tecnologica e ambiente*, CittàStudi, Milano, 2008

Mario Losasso, *Percorsi dell'innovazione. Industria, edilizia, tecnologie, progetto*, Clean, Napoli, 2011

Andrea Campioli, Monica Lavagna, *Tecniche e architettura*, CittàStudi Edizioni, Milano, 2013

Massimo Perriccioli, *Pensiero tecnico e cultura del progetto. Riflessioni sulla ricerca tecnologica in architettura*, Franco Angeli, Milano, 2016

More didactic materials will be provided during the course

TEACHING METHODS OF THE COURSE (OR MODULE)

The laboratory is divided into

a) theoretical lessons (1 CFU)

b) seminars (0.5 credits)

c) design exercises dedicated to the theme of the year (3.5 credits).

for the carrying out of the laboratory activity, multimedia supports, specialized software, online material are provided as well

EXAMINATION/EVALUATION CRITERIA

b) Evaluation pattern

Based on the results and skills demonstrated in the discussion of the project as well as the learning of the main issues relating to the execution of the project idea, the final grade will be weighted on the credits of each course in the laboratory.