UNIVERSITÀ DI PAVIA

Anno Accademico 2021/2022

TECHNICAL ARCHITECTURE 1 - MODULE

Enrollment year	2020/2021
Academic year	2021/2022
Regulations	DM270
Academic discipline	ICAR/10 (TECHNICAL ARCHITECTURE)
Department	DEPARTMENT OF CIVIL ENGINEERING AND ARCHITECTURE
Course	
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	1st semester (27/09/2021 - 21/01/2022)
ECTS	9
Lesson hours	84 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	GRECO ALESSANDRO (titolare) - 9 ECTS
Prerequisites	The student has to know the methods of representation of the building project at the different scale, from the plan to the details.
Learning outcomes	The educational aim is to provide students with the indispensable knowledge for understanding the building in its distributive, functional and constructive characteristics. Students will learn the cultural tools for autonomous study and in-depth analysis of basic construction technologies, with some mention of the most advanced and innovative ones. Students will learn how to explain a simple building project (developed during guided design activities) through the essential graphic drawings, preparing to act in the building process and more specifically in the design one.
Course contents	The course deals with the knowledge of the building and its components. The basic cognitive tools of construction technology are provided, useful

for design and construction activities through lessons, exercises and design laboratory.

Lessons
The first part of the course deals with preliminary topics to provide useful tools for understanding the subject: the specific terminology, the needs' definition and the analysis of the typological-environmental and technological requirements that characterize the building; the knowledge of the construction principles that operate the buildings; the main materials used in construction.
Then there will be some lectures on the house distribution and the simple typological housing (single house, patio, terraces, houses with balcony access).
The most extensive part of the course faces the knowledge of the building, divided according to the classification proposed by UNI standards. The discussion of the classes of technological units - structures, walls, dividers - and of the technical elements is aimed at learning the most common construction techniques and verifying their system operation.

Exercises
The exercises constitute a moment of typological research carried out in groups, through the study and analysis of projects characterized by the same horizontal distribution system. The research will be summarized in a dossier which will be presented by the different groups at the end of the course.

Laboratory
The laboratory activity, with compulsory attendance at least 80%, concerns the development of a simple residential building project. The students, organized into groups, learn to prepare the executive technical drawings of the project (representation scales 1: 100 and 1:50) and the construction details (1:20 - 1:10 - 1:5).

Teaching methods

Lectures (hours/year in lecture hall): 48; the professor will be in the hall, with live streaming.
Exercises (hours/year in lecture hall): 36; developed by small groups.
Laboratory (hours/year in lecture hall): 60; developed by small groups with tutors.

Exercises and Laboratory should be carried out in the hall, in compliance with the University's safety rules; the halls available will allow students to work effectively and safely, optimizing their knowledge and acquisition of design tools.

Reccomended or required readings

Considering the breadth of the topics, it is not possible to refer to a single text.
At the end of each lesson, bibliographical references and websites will be provided to study the topics.

Assessment methods

The admission to the examination is subject to the achievement of the Laboratory attendance and to the positive evaluation of the required design documents developed during the Exercises and the Laboratory.

	The exam consists of an oral interview on the topics developed during the lessons.
Further information	The admission to the examination is subject to the achievement of the Laboratory attendance and to the positive evaluation of the required design documents developed during the Exercises and the Laboratory. The exam consists of an oral interview on the topics developed during the lessons.
Sustainable development goals - Agenda 2030	$lbl_legenda_sviluppo_sostenibile