COURSE DESCRIPTION
ARCHITECTURAL WORKS CONSTRUCTION

SSD: TECNOLOGIA DELL'ARCHITETTURA (ICAR/12)

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

COURSE DESCRIPTION

TEACHER: FALOTICO ANTONELLA
PHONE: 081-2538638
EMAIL: antonella.falotico@unina.it

GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: NOT APPLICABLE
MODULE: NOT APPLICABLE
CHANNEL: 02 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER II
CFU: 8

REQUIRED PRELIMINARY COURSES

NONE

PREREQUISITES

NONE

LEARNING GOALS

In line with the objectives of the Course of Study and with the training to be completed in the following years in the field of Architecture Technology, the teaching aims to: a) understanding the relationship between technology and architecture, between concept and construction, between construction techniques, materials, products and technical information content; b) understand concepts relating to the building process and technical regulations by interpreting the building in systemic terms c) critically consider the appropriate use of resources and needs of individuals and the environment and the outcomes of the application of construction techniques d) interpret the logic behind construction solutions and indicate the main methodologies relevant to the choice of

technical-design solutions.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

The students must understand the relationship between technology and architecture, between design and realization moments, as well as the construction techniques, materials, products and contents of the technical information; the building process, the technical code. They must be able to interpret the built environment in systemic terms and as a synthesis of formal, functional, technical and environmental aspects. The educational path aims to provide students with the basic knowledge and methodological tools necessary to understand the implications of technical-performance aspects in architectural solutions.

Applying knowledge and understanding

The students must be able to frame interventions related to the built environment within the scenarios of the building process, covering the various aspects of production (construction, organization, economic factors, regulatory requirements), the appropriate use of resources and the needs of individuals and the environment. The training is geared towards providing the necessary operational skills to critically frame the results of the application of construction techniques and to apply technical information to design solutions.

COURSE CONTENT/SYLLABUS

The course, in consideration of its placement in the first year, proposes a preliminary reflection on the architectural project as a process capable of continuously developing relationships between the moment of conception (thought) and that of realization (technique, construction): technologies, whether they are product or process, are framed in a systemic vision taking into account the complexity and the sudden and revolutionary changes that contemporaneity imposes. The course aims to develop the basic concepts of the technological discipline, terminologies and technical conventions, products and construction procedures, in order to make students aware of the tools necessary for the physical construction of an architectural project. It is also aimed at encouraging a critical attitude on the use of resources and on the technical choices to be made in relation to the processes of transformation of the built environment and the challenges that digital culture and industry 4.0 imposes.

Subjects:

Project, process, technical culture Industrial production for construction

Concept of building system and systemic approach to design

Structural concept: systems and conditions of equilibrium

Parts of the architectural organism: foundations, earth floors and elevation structures, closures, internal solutions, roofs

Building in masonry

Building in reinforced concrete

Build in steel

Executive strategies and project
Construction site and digital manufacturing: innovation in the culture of building

READINGS/BIBLIOGRAPHY

Campioli A., Lavagna M., *Tecniche e architettura*, Città Studi, Milano, 2013.
Salvadori M., Heller R., *Le strutture in architettura*, Etaslibri, Milano, 1992 (cap. 1-7).
Falotico A., *Le strategie esecutive come materiale del progetto di architettura*, in Antonella Falotico, *Cantiere e costruzione*, Liguori, Napoli, 2003, pp.157-161.
Claudi de Saint Mihiel A., Falotico A.(a cura di), *Verso la Open Green Innovation. Cultura tecnologica e nuovi driver del progetto contemporaneo*/Towards Open Green Innovation. Technological culture and new drivers of the contemporary project, Maggioli, Sant'Arcangelo di Romagna, 2018, Capitolo 2, *Open Green Innovation per architetture digitali, adattive e resilienti*, da p. 105 a p. 119.

TEACHING METHODS OF THE COURSE (OR MODULE)

The course includes an articulation consisting of theoretical communications, classroom exercises and seminar activities aimed at the knowledge of materials and techniques typical of a technical culture of architectural design. The course therefore includes:
1. Lectures on specific topics of the technological culture of design
2. Basic frontal lessons in architecture technology
3. Elaboration of simple nodal details of reinforced concrete and steel buildings
4. Seminar activities aimed at deepening the technical culture in architectural design as well as aspects related to the digital approach to manufacturing
5. Inspections (where possible in relation to the anti-COVID-19 safety provisions) in specialized companies and construction sites Two tests will be carried out during the course (questionnaires in the form of open or closed questions) aimed at the preliminary assessment of learning

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- [ ] Written
- [x] Oral
- [ ] Project discussion
- [x] Other : Construction detail drawing and discussion

In case of a written exam, questions refer to

- [ ] Multiple choice answers
- [ ] Open answers
- [ ] Numerical exercises

b) Evaluation pattern