



COURSE DESCRIPTION ARCHITECTURAL CONSTRUCTION STUDIO

SSD: TECNOLOGIA DELL'ARCHITETTURA (ICAR/12)

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

COURSE DESCRIPTION

TEACHER: LOSASSO MARIO ROSARIO
PHONE:
EMAIL: mariorosario.losasso@unina.it

GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: NOT APPLICABLE
MODULE: NOT APPLICABLE
CHANNEL: 01 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: II
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER II
CFU: 8

REQUIRED PRELIMINARY COURSES

ARCHITECTURAL BUILDING

PREREQUISITES

None

LEARNING GOALS

According to the objectives of the Degree Programme and to the training matured in the previous years within the disciplinary area of ARCHITECTURAL TECHNOLOGY, the teaching aims to:

- understand the criteria, methods and tools of technological and environmental design in the development of the project in relation to the demanding framework and the socio-cultural, technical-productive and environmental context;
- use basic methodological tools necessary for the control, of a systemic type, of the levels of complexity of the project
- design within a sustainable development framework and with cognitive and design approaches

aimed at

innovation, experimentation, building renovation; recovery;

d) use the main methodologies pertinent to the evolution of the culture of living and building in relation to

settlement systems;

e) produce with clarity and rigour graphic-descriptive works and documents.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

The student must understand the criteria, methods and tools of technological and environmental design in the development of the project, as well as the problems related to design and technical-constructive choices in relation to the demanding framework, and the socio-cultural, technical-productive and environmental context. The training course aims to provide students with the basic knowledge and methodological tools necessary for the systemic control of project complexity levels.

Applying knowledge and understanding

The student must be able to design within a framework of sustainable development and with cognitive and design approaches aimed at innovation and experimentation, with reference to the emerging aspects of environmental and digital culture, as well as the culture of maintenance and redevelopment. The teaching programme intends to transmit the operational skills necessary to concretely apply the knowledge, methodologies, strategies and solutions for living through the control of the different scales and levels of the project.

COURSE CONTENT/SYLLABUS

The Design Studio programme is structured to provide appropriate knowledge, operational methodologies and technical information for a technological culture approach to design, where technology represents an intellectual resource and an enabling component to achieve experimental, testable and measurable objectives in contemporary design research.

The teaching activity will be set up taking into account the current environmental challenges - in compliance with the national and international regulatory framework - with reference to the scenarios of green economy, circular economy, technological innovation, fight against pandemic and climatic risks, efficiency of building processes and products, waste reduction, as stated in the United Nations Agenda 2030 and the European Green Deal. The programme will cover the following topics:

- Relationship between theory and practice in architecture
- Culture, environmental ethics and the socio-technical context
- Distinctive topics of technological and environmental design;
- Evolving conceptions of contemporary design;
- Climatic and pandemic environmental impacts and design adaptation solutions;
- The transition to eco-districts: new scenarios for urban and building design;

- Design experimentation in the residential field;
- Technical information and implications in architectural design;
- Technological-environmental principles and solutions in contemporary housing;
- Design of model-technological solutions for the existing residential heritage;
- Design of technological retrofit for climate adaptation and mitigation.

READINGS/BIBLIOGRAPHY

- AA. VV., *Manuale di progettazione edilizia*, vol. 4, Tecnologie, Hoepli, Milano, 1997.
- Bologna F., Losasso M., Mussinelli E., & Tucci F. (eds), *Dai distretti urbani agli eco-distretti. Metodologie di conoscenza, programmi strategici, progetti pilota per l'adattamento climatico. From Urban Districts to Eco-districts Knowledge. Methodologies, Strategic Programmes, Pilot Projects for Climate Adaptation*, Maggioli, Santarcangelo di Romagna (RN), 2020 (e-book open access consultabile al link: <http://www.sitda.net/index.php/biblioteca-sitda.html>).
- D'Ambrosio, V. & Leone, M. (eds), *Progettazione ambientale per l'adattamento al Climate Change*. Volume 1. *Modelli innovativi per la produzione di conoscenza (2016)* e Volume 2. *Strumenti e indirizzi per la riduzione dei rischi climatici (2017)*, Clean, Napoli, 2016 (e-book open access consultabile al link: <http://www.sitda.net/index.php/biblioteca-sitda.html>).
- Leone, M. & Tersigni, E., *Progetto resiliente e adattamento climatico. Metodologie, soluzioni progettuali e tecnologie digitali*, CLEAN, Napoli, 2018.
- Losasso M, Lucarelli, M T., Rigillo M. & Valente R., (eds) *Adattarsi al clima che cambia. Innovare la conoscenza per il progetto ambientale / Adapting to the Changing Climate. Knowledge Innovation for Environmental Design*, Maggioli, Santarcangelo di Romagna (RN), 2021 (e-book open access consultabile al link: <http://www.sitda.net/index.php/biblioteca-sitda.html>).
- Russo Ermolli, S. & D'Ambrosio, V. (eds), *The Building Retrofit Challenge. Programmazione, progettazione e gestione degli interventi in Europa*, Alinea Editrice, Firenze, 2012.

Supplementary material will be provided to students during the course.

TEACHING METHODS OF THE COURSE (OR MODULE)

Teaching modules organised in: face-to-face lessons, interactive teaching, self-study modes (group exercises, workshops, conferences, webinars, online forums, lessons recorded in repository on the Teams platform).

Students are expected to produce the following exercise tasks:

1. Relationship between theory and practice in architecture and between technology and design (report).
2. Contemporary culture, environmental ethics and socio-technical context (report).
3. The "Words" of Technological and Environmental Design (PPT).
4. Construction details of a standard reinforced concrete building (design exercise).
5. Eco-districts and contemporary housing: technological and environmental topics (PPT).
6. Technical information and technological design in residential complexes (file and model solutions).
7. Renovation building: design experiment of a climate proof and post pandemic intervention for residential housing (design exercise).

The expected results relate to the ability of students - to grasp the relationships between individuals, architectural interventions and the environment; - to know and govern the technological and environmental design of the building/open space system for climate adaptation and mitigation; - to design interventions responding to up-to-date environmental, social and economic requirements frameworks according to the targets of ecological transition and climate protection.

EXAMINATION/EVALUATION CRITERIA

b) Evaluation pattern