

## MASTER'S DEGREE IN ARCHITECTURE

### • FUTURE ARCHITECTS

The architect who completes the Master's Degree Program is professionally recognized at national and European levels. She/he combines technical knowledge, professional skills and cultural preparation through formation in a highly interdisciplinary environment. Underlying all activities there is a design approach, innovative and creative, able to answer responsibly to the needs of contemporary society: improving the quality of life, managing fragile territories, restoring and enhancing cultural heritage, building in an environmentally conscious and sustainable way. The variety of problems to face and the variety of stimuli contribute to prepare an architect capable of confronting, understanding and managing the complexity of the world we live in, contributing to the well-being of the community.

## WHY STUDY IN GENOA

### • The Campus

The Architecture and Design Department is located in the ancient heart of Genoa, close to a metro station and places for socializing and entertainment; it is a small "green" campus, rebuilt in a modern manner on the ruins of the medieval convent of the Sisters of St. Sylvester.

### • Relations with national and international research

The professors teaching in the Master's Program maintain a close relationship with the world of research, both national and international, with significant contributions to education and its rapport with the world at large.

### • Diversified teaching approaches

The Master's Program includes in-depth disciplinary courses and design workshops, at different scales and on different topics, often in coordination with public and local authorities. Workshops, summer schools, visits to construction sites, study trips, contribute to forming the architect of the future.

### • International experiences, internships

The Department offers numerous scholarships for training and work abroad. The Renzo Piano Foundation provides an annual internship at the RPBW studio in Paris. The Master's Program also offers internships and job placement.

and



## FIRST SEMESTER

**Cultura tecnologica della progettazione - Technological Culture of Design** (6 CFU)

**Impianti tecnici per l'architettura - Technical Systems for Architecture** (6 CFU)

**Legislazione urbanistica - Town Planning Legislation** (4 CFU)

**Teoria delle strutture - The Theory of Structures** (4 CFU)

**Urbanistica e fattibilità - Urban Planning and Feasibility** (12 CFU)

## SECOND SEMESTER

**Laboratorio di progettazione architettonica e urbana A - Architectural Design Workshop A**  
(12 CFU)

**Laboratorio di progettazione architettonica e urbana B - Architectural Design Workshop B**  
(12 CFU)

**Laboratorio di restauro architettonico A - Architectural Restoration Workshop A** (12 CFU)

**Laboratorio di restauro architettonico B - Architectural Restoration Workshop B** (12 CFU)

**Progetto di strutture - Structural Design** (4 CFU)

## FIRST SEMESTER

**Metodologie di rappresentazione per il progetto - Methodologies of Representation for the Project** (6 CFU)

**Storia dell'architettura – History of Architecture** (6 CFU)

## ONE WORKSHOP AMONG:

**Laboratorio di progettazione integrate, costruire nel costruito - Integrated Design Workshop. Building on Existing Buildings** (12 CFU)

**Laboratorio di progetto, tecnologia e ambiente - Design, Technology and Environment Workshop** (12 CFU)

**Laboratorio di progettazione per il restauro e la valorizzazione del patrimonio culturale - Design Workshop for the Restoration and Enhancement of the Cultural Heritage** (12 CFU)

**Laboratorio di urbanistica avanzata e nuovi habitat - Workshop on Advanced Urban Planning and New Habitats**(12 CFU)

## ONE COURSE AMONG:

**Progettazione tecnologica per il costruito - Technological Design for Existing Buildings** (8 CFU)

**Sostenibilità ambientale nel progetto di architettura - Environmental sustainability in the architectural project** (8 CFU)

**Teoria, pratiche e procedure dell'architettura costruita - Theories, Practices and Procedures of the Architecture of Existing Buildings** (8 CFU)

**Urbanistica e innovazione - Urban Planning and Innovation** (8 CFU)

## FIRST SEMESTER

**Coastal design and others extreme environments** (6 CFU)

**Progettazione integrata con il metodo B.I.M. - Design Integrated with the B.I.M. Method** (6 CFU)

## SECOND SEMESTER

**Architettura degli interni - Interior Architecture** (6 CFU)

**Architettura del paesaggio contemporanea - Contemporary Landscape Architecture** (6 CFU)

**Architettura e città medievale nel mediterraneo e nel mondo islamico - Architecture and the Medieval city in the Mediterranean and in the Islamic World** (6 CFU)

**Diagnosi, progettazione e certificazione energetica degli edifici - Diagnosis, Design and Energy Certification of Buildings** (6 CFU)

**Ecologia per il progetto di territorio - Ecology for the Territorial Project** (6 CFU)

**Geomorfologia per il progetto del paesaggio - Geomorphology for the Landscape Project** (6 CFU)

**Morfologia strutturale - Structural Morphology** (5 CFU)

**Progettazione esecutiva - Detailed Design** (6 CFU)

**Progetto Villard - Villard Project** (6 CFU)

**Storia delle scienze e delle tecniche costruttive - History of Construction Science and Techniques** (6 CFU)

**Urban design** (6 CFU)

## Technological Culture of Design Cultura tecnologica della progettazione (6 CFU)

Torna all'indice 

 Prof. Arch. Giovanna Franco

 Prof. Arch. Adriano Magliocco

### PRESENTATION, OBJECTIVES AND CONTENTS

The course explores some fundamental topics of the “constructive” culture of contemporary design, transversal to the process of design and implementation, through the critical reading of paradigmatic examples and the development of specialized technical knowledge. The knowledge and skills acquired will be useful for sustainable architectural design in response to the needs of the contemporary society, at different levels and in different contexts.

The course, of a theoretical-methodological character, deals with the following topics:

- 1) Technique, technology and architecture: the role of technological disciplines in the process of design and construction
- 2) Technology, digital processes and new materiality in contemporary architectural design
- 3) Constructive approaches between tradition and ephemeral design: dry construction in steel and wood
- 4) Casings and decoration: matter and expression, detailed solutions
- 5) Requirements and performance of the building envelope: strategies and materials for thermal, acoustic and light control
- 6) Architecture and systems: problems concerning integration
- 7) Quality and building process, construction and construction site
- 8) Relations and interactions of the concepts of duration and durability in building construction

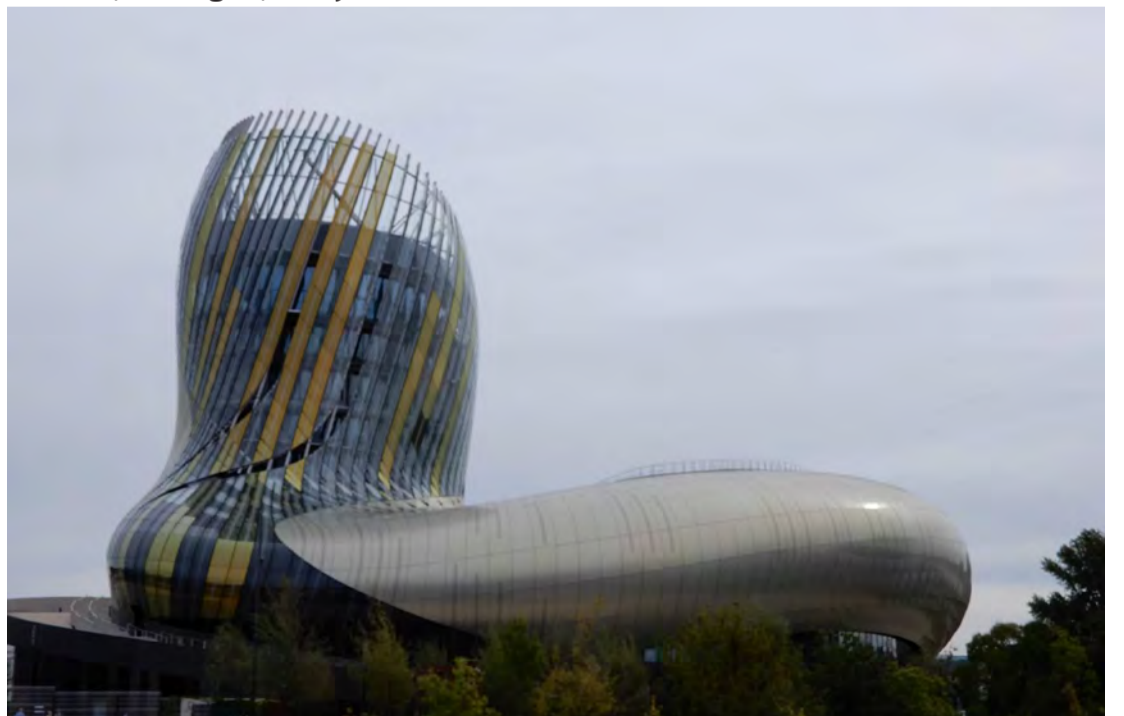
At the end of the course, the student will be able to confront and manage the complexity of the themes underlying an architectural project planned on the basis of quality objectives and criteria; to correctly set up a design theme, also in terms of requirements and performance; to understand the potential and limitations of digital tools; to learn about aspects and problems related to actual feasibility and the growing role of the envelope as a technical and expressive element.



Museo Guggenheim, Bilbao, Frank O. Gehry



MUCEM, Marsiglia, Rudy Ricciotti



La Cité du Vin, Bordeaux

## Technical Systems for Architecture Impianti tecnici per l'architettura (6 CFU)

Torna all'indice 

 Prof. Ing. Stefano Lazzari

### PRESENTATION, OBJECTIVES AND CONTENTS

The course aims at illustrating the fundamental aspects relating to the physical behavior of buildings and systems together with the main technological systems that are adopted in a building to create conditions of thermal, acoustic and light well-being and energy efficiency.

During the teaching activities the main types of systems that characterize a building are illustrated and in particular:

- The air conditioning system
- The hydro-sanitary system
- The electrical system

The teaching activities also include the carrying out of numerical exercises relating to some topics dealt with in a theoretical way.



## Town Planning Legislation Legislazione urbanistica (4 CFU)

Torna all'indice 

 Prof. a.c. Mauro Vallerga

### PRESENTATION, OBJECTIVES AND CONTENTS

The course aims at providing the basic notions of urban-environmental laws and legislation deemed necessary and fundamental for carrying out the profession in a broad sense.

In fact, reference is made both to future freelance activities and to any work activity as an employee of the Public Administration or private Companies operating in the construction sector and/or dealing with the transformation of the territory. Therefore, on a theoretical level, topics of various scales and of particular relevance in the contemporary context are dealt with.

## The Theory of Structures Teoria delle strutture (4 CFU)

 Prof. Ing. Luigi Gambarotta

### PRESENTATION, OBJECTIVES AND CONTENTS

The Theory of Structures module is part of the integrated subject of Theory and Design of Structures.

During the teaching activities, knowledge is provided for the acquisition of the foundations and methodologies for the study of the deformation and of the equilibrium of complex structures.

This knowledge includes:

- the fundamental elements of the dynamic and seismic response
- the fundamentals of the analysis of the states at the limit of plastic collapse
- assisted structural analysis methodologies, useful for safety assessment and the design of architectural construction systems. The course consists of lessons and exercises in calculation.

## Urban Planning and Feasibility Urbanistica e fattibilità (12 CFU)

- Prof. Arch. Roberto Bobbio
- Prof. Arch. PAolo Rosasco

Torna all'indice

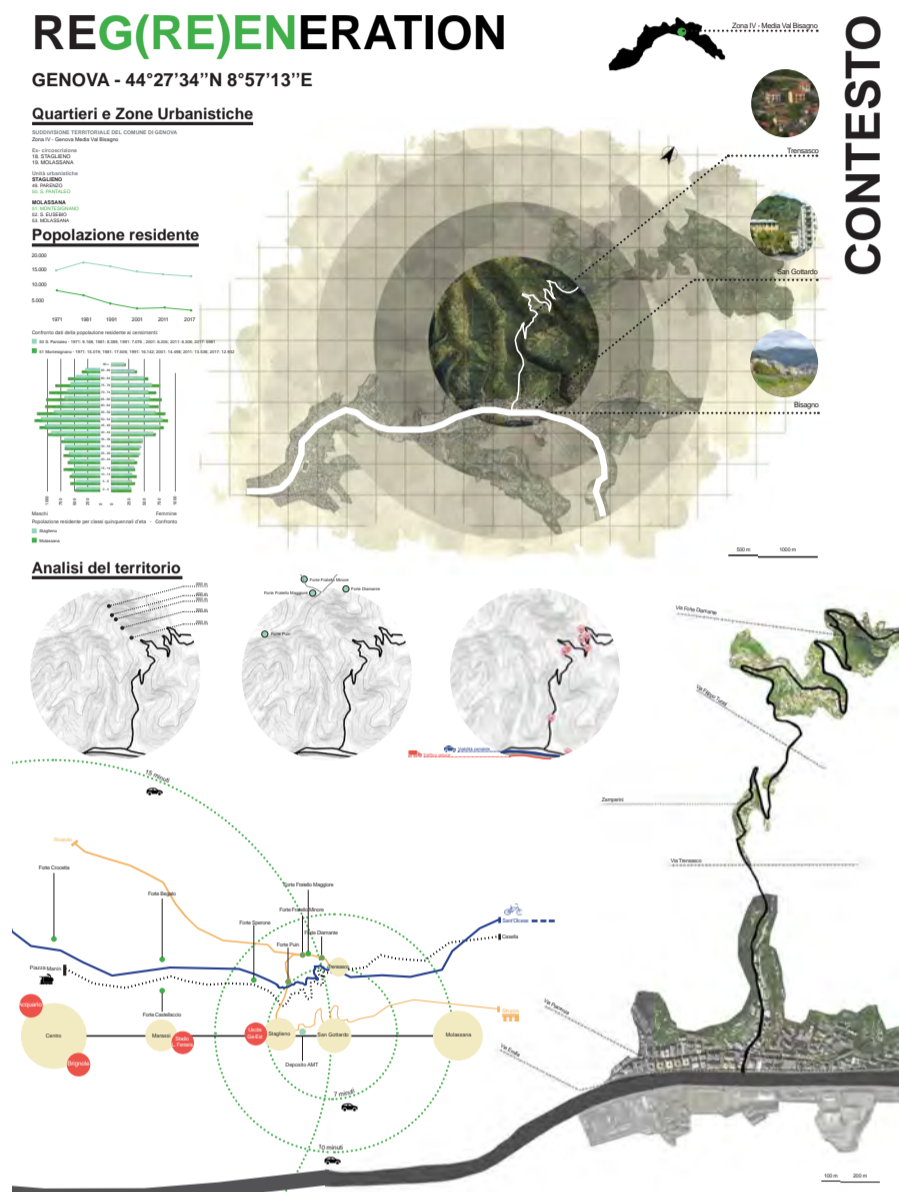
### PRESENTATION, OBJECTIVES AND CONTENTS

The course is integrated and consists of an Urban Planning module and an Evaluation module and is divided into lessons and subsequent applications, training exercises in reading and surveying the territory, a case study, in which a territory will be examined in order to develop critical planning skills, according to a learning process that is mainly inductive.

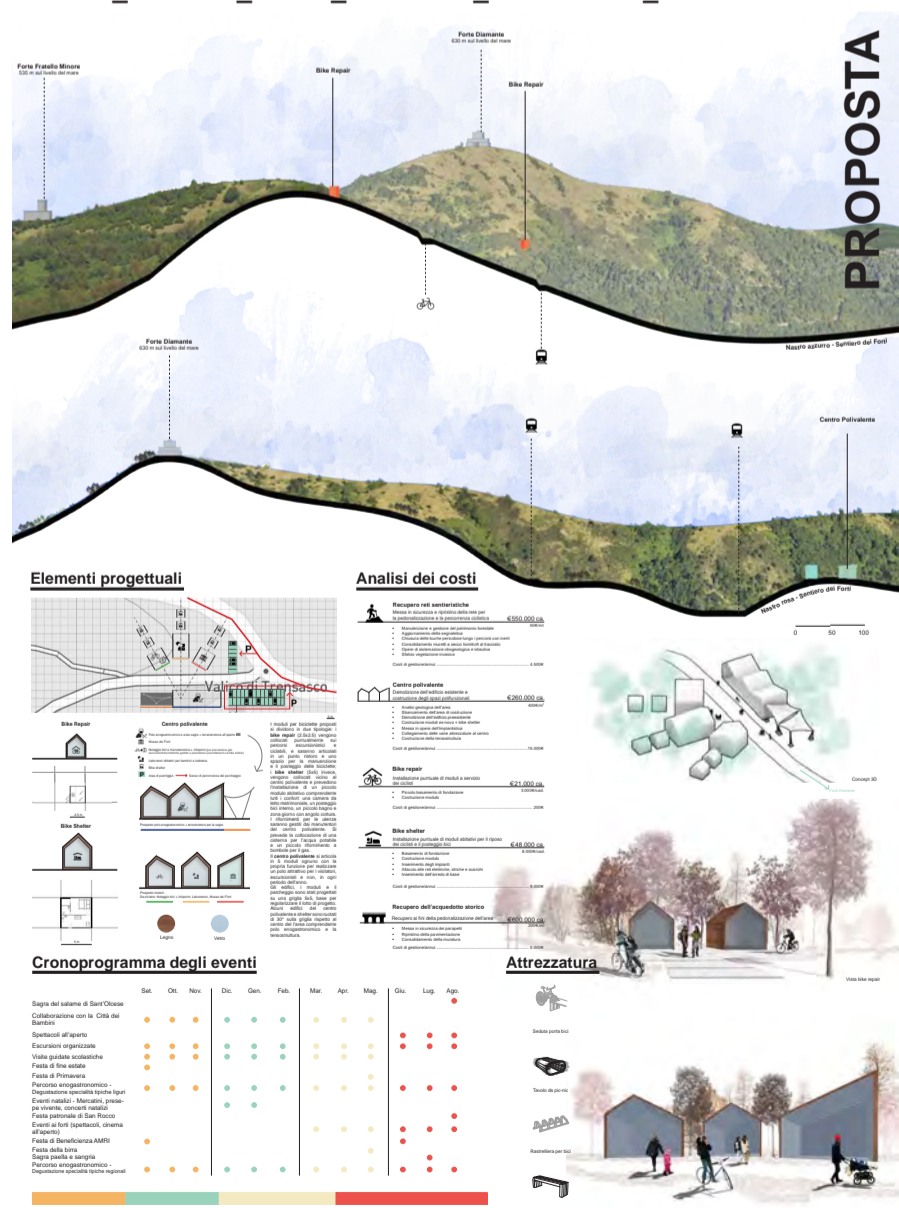
The training course in the urban planning module is aimed at acquiring knowledge and skills regarding the tools with which the transformations of the city, the territory, the environment and the landscape are analyzed, controlled and designed. The urban and territorial plan are considered in their interpretative and design value, in the applications of different scales and sectors as a reference framework as a beginning to the critical use of the knowledge, analytical apparatus, operational and planning tools of the urban planner.

The theme of the valuation module is assessment as a tool in support of the complex decision-making processes such as those inherent in urban and territorial transformations. In particular, the qualitative-quantitative assessment methodologies will be dealt with which make it possible, in an integrated way, to assess the economic, social and environmental sustainability of the design proposals developed in concert with the urban planning module.

In the academic year 2020-2021 the students worked on Valbisagno, a territory in transition. Valbisagno is an Apennine valley largely included in the Municipality of Genoa, very distinct from an environmental point of view and as a settlement, where the evolution of new integrated economies and new lifestyles that connect the local and the global, proximity and distancing can be envisaged, putting local resources back into circulation and involving the inhabitants in alternative strategies of development in order to build landscapes where cities and the countryside find renewed integration.



Accomo\_Boretto\_Croce\_Benedici\_S Gottardo\_A.A. 2020-2021



Accomo\_Boretto\_Croce\_Benedici\_S Gottardo\_A.A. 2020-2021



Architectural Design Workshop A  
 Laboratorio di progettazione architettonica A (12 CFU)

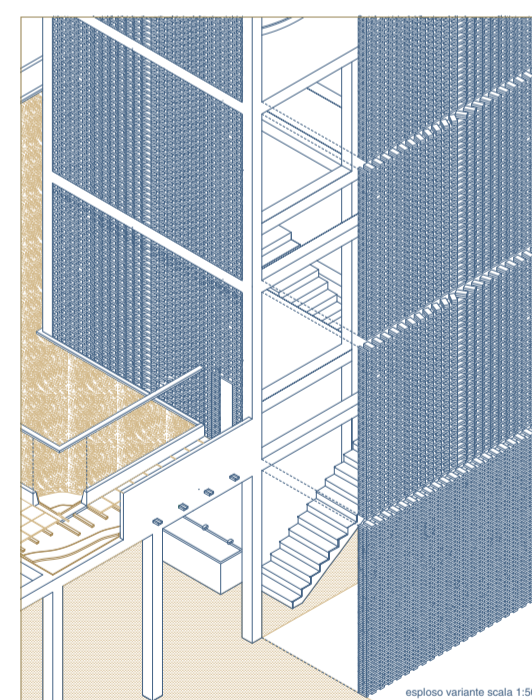
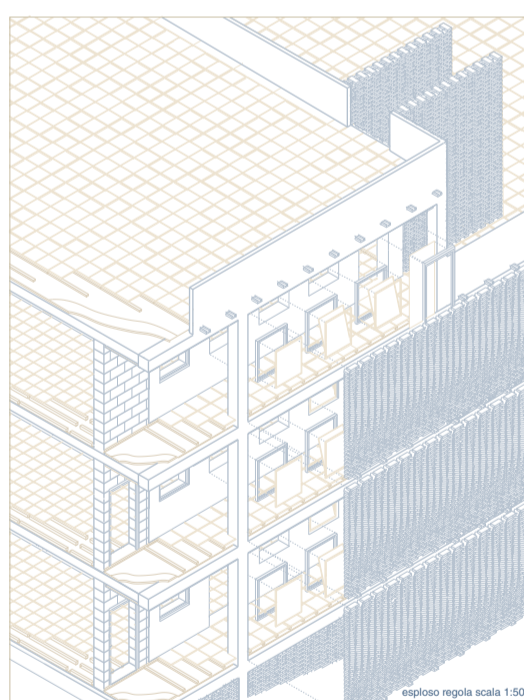
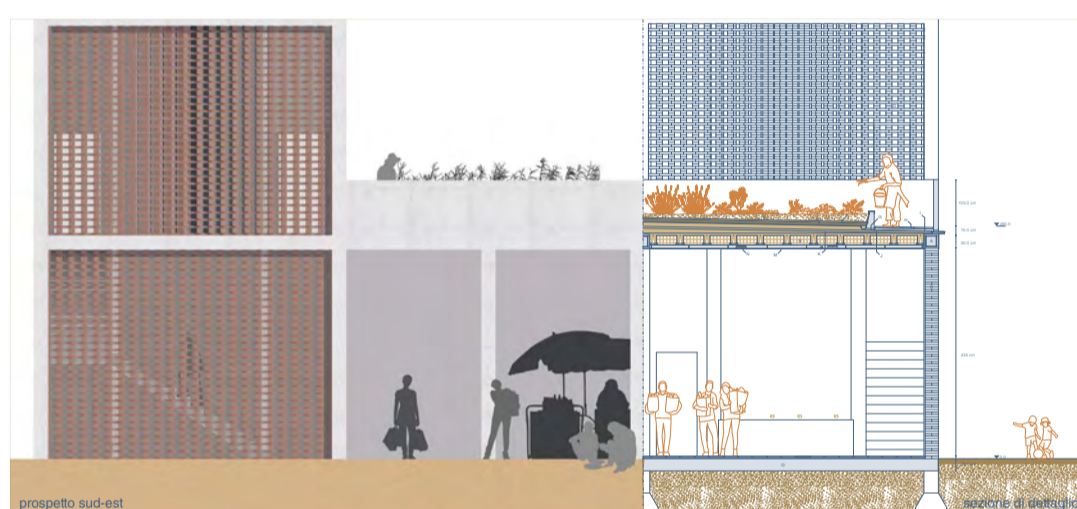
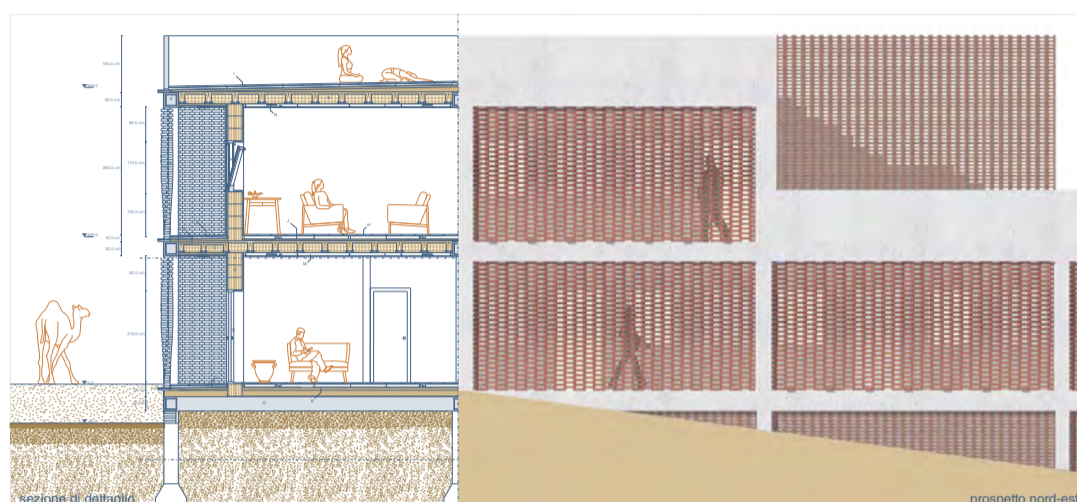
Torna all'indice

Prof. Arch. Christiano Lepratti

PRESENTATION, OBJECTIVES AND CONTENTS

The workshop has as its primary objective the teaching of architectural composition, understood as an activity of formal, functional and constructive synthesis of the various disciplines, humanistic, technical-scientific, which compete in the building activity. The objective of the course is therefore to encourage interaction with different levels and scales of intervention, spatial, functional and environmental.

The workshop has as its primary objective the activity of creating designs applied to complex and integrated designs for architecture, the city, the landscape. It deals with the different scales of design by verifying them through drawings and models. The activities of design are carried out in seminar form, through critical comparisons and group discussions within the workshop.



SKIN

Architectural Design Workshop B  
Laboratorio di progettazione architettonica B (12 CFU)

Torna all'indice

Prof. Arch. Marco Casamonti

PRESENTATION, OBJECTIVES AND CONTENTS

The workshop has as its primary objective the teaching of architectural composition, understood as an activity of formal, functional and constructive synthesis of the various disciplines, humanistic, technical-scientific, which compete in the construction activity. The objective of the course is therefore to encourage interaction with different levels and scales of intervention, spatial, functional and environmental. Exploring and pursuing complexity, celebrating and articulating diversity, encouraging and giving impetus to multi-faceted interaction - between processes and information, programs and uses, contexts and realities - by designing new spaces, new transversal scenarios (architectural, urban, territorial and social), in tune with a new (open) relational logic. The course is divided into ex-cathedra lectures, seminars, mainly group exercises, seminar corrections of the exercises, a final intensive workshop. The lessons cover issues that are considered essential for the acquisition of critical skills and design skills appropriate to the theme of the workshop. The exercises are conceived of as a path of progressive in-depth study of the topic of the workshop.

EMERGENZA PANDEMIA

Il COVID-19 è una malattia infettiva respiratoria. Il virus risulta altamente contagioso. Il virus respiratorio si diffonde principalmente attraverso il contatto stretto con una persona malata. La via primaria sono le goccioline del respiro delle persone intette, il contagio può avvenire quindi tramite la saliva, **tossendo e starnutendo**, attraverso contatti diretti personali toccando con le mani contaminate (non ancora lavate) bocca, naso o occhi. Il contagio può inoltre avvenire tramite il **contatto con superfici contaminate**.

ABITARE CON L'EMERGENZA

Con il sopraggiungere della pandemia e quindi dell'emergenza, la maggior parte degli edifici residenziali esistenti si sono rivelati non adatti a sostenere in maniera adeguata e confortevole una situazione di lockdown come quella che si è presentata. Gli spazi all'interno degli appartamenti, che prima erano mono-funzionali sono diventati polifunzionali. La cucina ad esempio è diventata luogo in cui svolgere smart-working, il salotto per svolgere anche attività fisica; la camera da letto, oltre che luogo di studio è diventata aula di scuola virtuale. Gli ingressi delle abitazioni, ormai concepiti come open space nella maggior parte dei casi, si sono dovuti adattare per cercare di creare un filtro per la sanificazione degli abitanti della casa e degli oggetti (beni alimentari e altro) che fossero venuti a contatto con l'esterno e quindi con la zona "infetta".

RIUSO

Nel tempo l'utilità e la funzionalità di un edificio diminuiscono rispetto alla loro funzione attuale, questo fa sì che un edificio possa diventare obsoleto. Si prende quindi in considerazione la possibilità di costruire sul tessuto urbano esistente, non si costruisce più sul vuoto, ma sul pieno. Per adattare gli edifici, in questo caso ad uso abitativo, si possono studiare delle modifiche, più o meno invasive, che permettano di annessere nuovi spazi o adattare quelli esistenti. Gli edifici e l'architettura devono adattarsi per sopravvivere ai repentini cambiamenti della società: le abitazioni devono evolversi. Da queste considerazioni nascono due concetti fondamentali da tenere presenti: gli obiettivi da soddisfare, che guideranno il processo di concept del progetto e le azioni atte alla creazione dello spazio aggiuntivo.

SOCIAL HOUSING

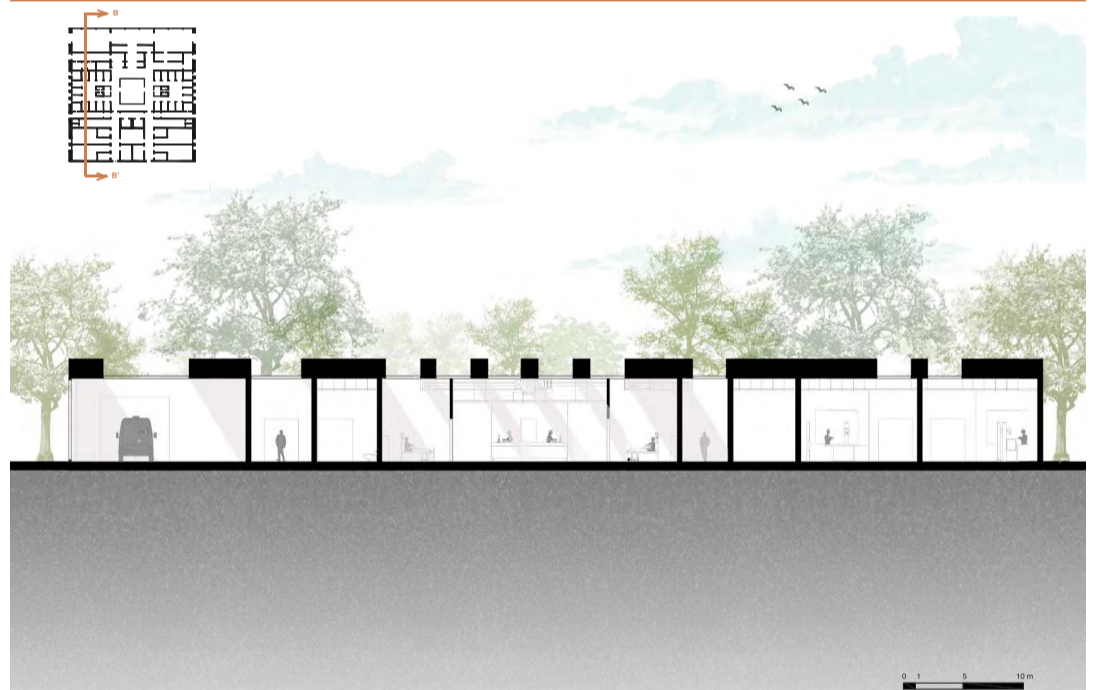
In un momento di crisi economica come quello attuale il social housing rappresenta un vantaggio per l'intera comunità. Rappresenta un'opportunità per l'economia in generale, il settore immobiliare in particolare, perché nella maggior parte dei casi si tratta di appartamenti a basso costo. Il Social Housing è caratterizzato da pluralità di azioni ed iniziative e forte connotazione sociale. Le principali categorie di utenti del social housing risultano:

- Nuclei familiari a basso reddito
- Giovani coppie
- Anziani in condizioni economiche svantaggiate
- Studenti fuori sede/ lavoratori precari

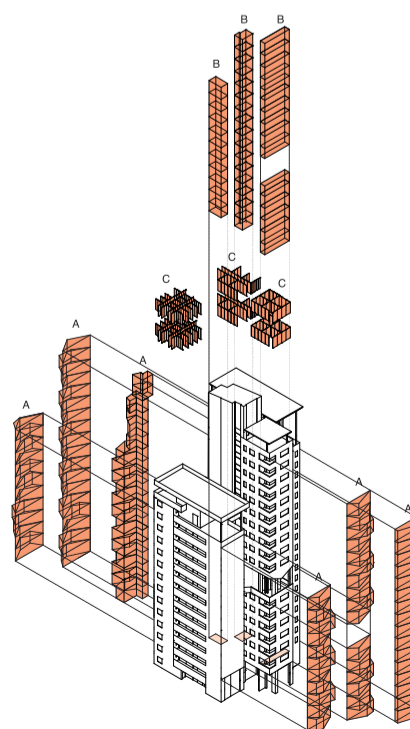
Bertamino \_ LifeZone\_A.A. 2019-2020

SEZIONE B-B'

07  
ELABORATI TECNICI



Traversa\_Cuvato\_Celle\_A.A. 2019-2021



TIPOLOGIA A	TIPOLOGIA B	TIPOLOGIA C
DOVE	DOVE	DOVE
DESTINAZIONE D'USO	DESTINAZIONE D'USO	DESTINAZIONE D'USO
smart working	sanification area	smart working
area studio	sanification area	area studio
area gioco	sanification area	area gioco
attività fisica	sanification area	area gioco
		kindergarten
		attività fisica

Cuccu\_LifeZone\_A.A. 2019-2020

Architectural Restoration Workshop A  
Laboratorio di restauro architettonico A (12 CFU)

Torna all'indice ☰

👤 Prof. Arch. Anna Boato

PRESENTATION, OBJECTIVES AND CONTENTS

The workshop provides students with the basic knowledge and methodological preparation necessary to:

- choose and use the procedures and techniques of direct and indirect architectural analysis, with particular regard to the survey, history, archaeological analysis of existing buildings, examination of the architectural and construction components, the identification and characterization of materials, the analysis of the phenomena of the degeneration of materials and of the elements of construction;
- draw up the technical papers summarizing the analytical and diagnostic phases (thematic maps, diagnostic frameworks, reports, ...);
- define the general and detailed objectives of restoration design, in light of the disciplinary debate on restoration and taking into account the specific potential of the building, its current or planned function, its territorial and landscape context and the problems brought to light during the analysis, - identify the needs, priorities and possible methods of intervention, also taking into account the relevant legislative regulations;
- choose the most appropriate restoration techniques in order to preserve those parts that are subject to protection, consolidating, cleaning and possibly integrating them, and designing what is necessary to use the building safely and in a manner appropriate to its nature as a historical-artistic asset;
- prepare the technical and administrative papers for the restoration plan, from the illustrative report to the graphic drawings, all the way up to the quantitative and economic estimates.



Villa Lertora

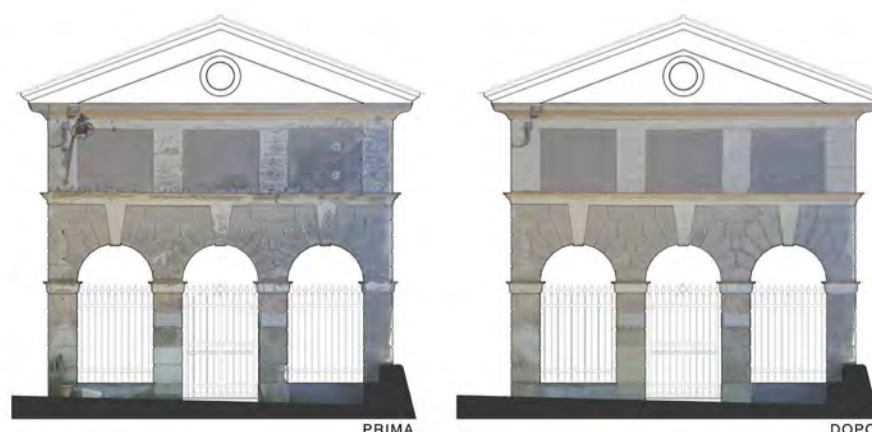
Laboratorio di restauro architettonico A - 2020  
Prof. Anna Boato      Studente: Rudi Wolfsgruber



Wolfsgruber\_A.A. 2020-2021



Wolfsgruber\_A.A. 2020-2021



Wolfsgruber\_A.A. 2020-2021

Architectural Restoration Workshop B  
Laboratorio di restauro architettonica B (12 CFU)

Torna all'indice

Prof. Arch. Daniela Pittaluga

PRESENTATION, OBJECTIVES AND CONTENTS

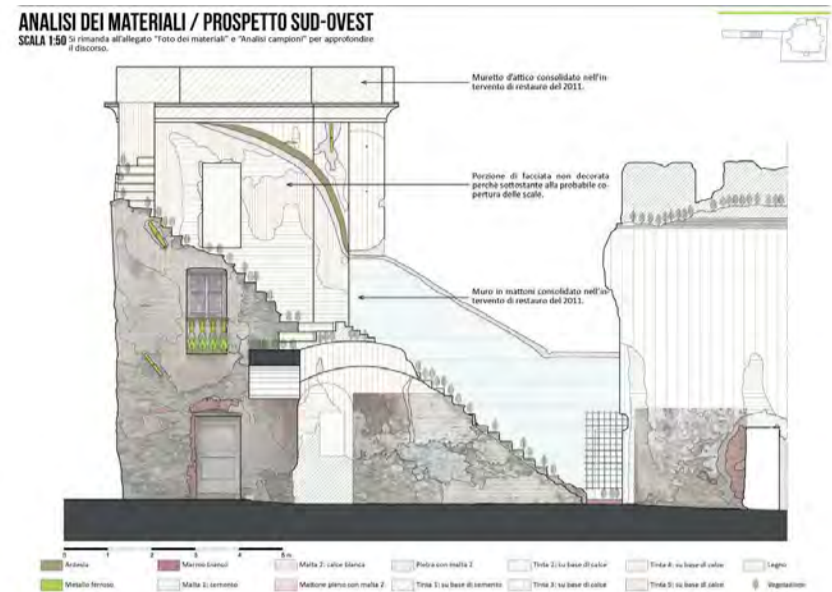
The aim of the workshop is to provide students with conceptual and operational information and tools necessary to consciously act upon existing buildings and, in particular, on the oldest architectural heritage that is subjected to protection.

The didactic activities include, in a brief summary:

- ex-cathedra lectures, even with the participation of experts from the world of the profession, businesses and institutions, aimed at providing a broad and general picture of the tools and technical and operational problems regarding architectural restoration in our contemporary scenario. Among these, the following stand out: the methods and forms of analysis and non-destructive diagnosis of architecture; the methods and tools of historical analysis of indirect sources; the forms and tools for analyzing direct sources, through contributions from the Archaeology of Architecture; the contents, forms and requirements of the project of conservation, maintenance and restoration; the framework regarding regulations and protection in Italy and abroad;

- operational workshop activities, carried out in the classroom and/or in situ, by means of which students will be guided in the process, from the analysis and the diagnosis of the existing artifact, chosen in agreement with the teacher, up to the final design of the interventions aimed at its conservation, maintenance and/or restoration.

The activities of the workshop make use of the technical support provided by the Department's Workshop for Analytical Methods of Restoration and History of Existing Buildings (MARSC).



Torre Rossa - Borghetto Santo Spirito. Studenti: Crosta, Ludovico, Pastorino, Roca

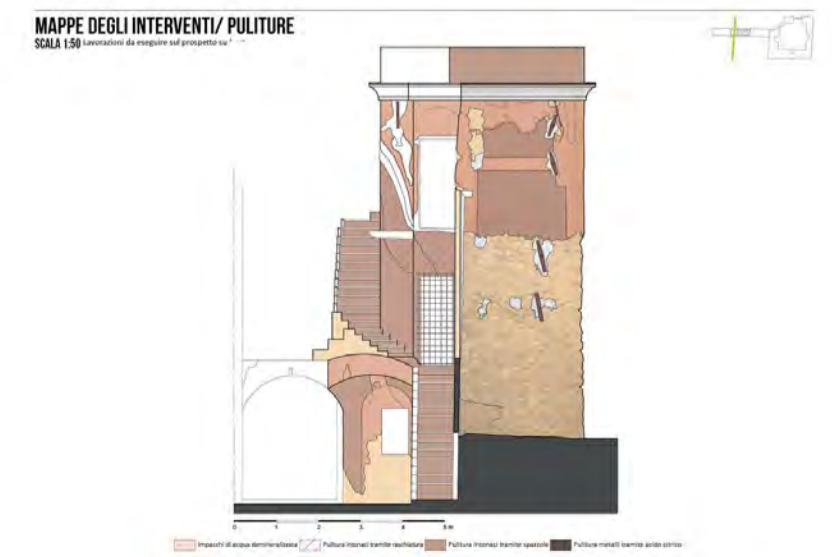


Torre Rossa - Borghetto Santo Spirito. Studenti: Crosta, Ludovico, Pastorino, Roca

ALLEGATO / ANALISI DEI CAMPIONI DI MATERIALE

Numero campione	Localizzazione	Legante	Aggregato	Diametro aggregato	Rapporto C/M	Grado arrotondamento	Note
1	facciata Sud-Est	calce bianca	sabbia marina locale con quarzo, calcare	2mm	medio	subarrotondato	
2	facciata Nord-Ovest	calce bianca	sabbia marina locale con quarzo, calcare	2mm	alto	subarrotondato	lenta a base di calce
3	facciata Sud-Ovest	calce bianca	sabbia marina locale con quarzo, calcare	2mm	medio	subarrotondato	

Torre Rossa - Borghetto Santo Spirito. Studenti: Crosta, Ludovico, Pastorino, Roca



Torre Rossa - Borghetto Santo Spirito. Studenti: Crosta, Ludovico, Pastorino, Roca

## Structural Design

### Progetto di strutture (4 CFU)

 Prof. Ing. Stefano Podestà

#### PRESENTATION, OBJECTIVES AND CONTENTS

The module, which belongs to the integrated subject of “Theory and Structural Design”, aims at providing the necessary knowledge to correctly identify, formulate and solve the structural problems of architectural design and understand the technical language of construction engineering. The fundamentals of the physical-mechanical properties of the materials that most affect the structures are:

- concrete,
- steel,
- wood
- structural glass.



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## Methodologies of Representation for the Project Metodologie di rappresentazione per il progetto (6 CFU)

[Torna all'indice](#)  Prof. Arch. Cristina Cándito

### PRESENTATION, OBJECTIVES AND CONTENTS

The course aims at providing functional knowledge for an in-depth study of and experimentation in the methodologies of representation for the project (at different scalar dimensions) and for the critical analysis of what already exists. In this general vision in which design is configured as an elaborative medium to confront the complexity of the design (understood as a de-novo creative act or as a system of operations and phases functional to cognitive processes) we also want to underline the value of the representation as an aesthetic autonomous subject, expressive of forms of critical and authorial research.

The student will be confronted with a theoretical and practical path that will lead him/her to acquire knowledge of the scientific foundations (geometric, optical and perceptual) and the technical methods of using some updated tools for the creation of models, drawings and images (parametric modelling, photo-insertion, rendering, panoramic photography, video).

Training exercises are proposed that consist in creating a spatial configuration through parametric modelling systems, in its insertion in an urban context and in its representation by choosing the expressive modes considered most effective.

The student will acquire not only the technical tools, but also the critical ones that will enable him/her to motivate and illustrate the different stages of elaboration.



Multivibes\_A.A. 2020-2021



Merluzzi e compagni\_A.A. 2020-2021



Bavassano\_Bertamino\_Castaldi\_Storage\_Traversa\_A.A. 2020-2021

## History of Architecture Storia dell'architettura (LM) (6 CFU)

Torna all'indice 

 Prof. Marco Folin

### PRESENTATION, OBJECTIVES AND CONTENTS

The course aims at presenting some of the fundamental concepts of architectural historiography - tradition and innovation, language, author, design ... - illustrated via some specific cases, read and analyzed starting from some general questions. Two different perspectives, which are not irreconcilable in themselves, will be privileged: on the one hand, the history of culture and ideas; on the other hand, attention to urban spaces and their contexts (social, political, cultural ...) considered as essential factors of any constructive dynamics. At the end of the course, the student will have to know the main episodes and monuments of the history of the city and urban planning in Europe between the sixteenth and nineteenth centuries. He/she will also have to master the issues and concepts discussed in the lessons:

- the various configurations in the history of the dynamics of urban planning;
- the cultural meanings and the political, economic, social role of architecture;
- the specificity of the contexts and related dynamics.

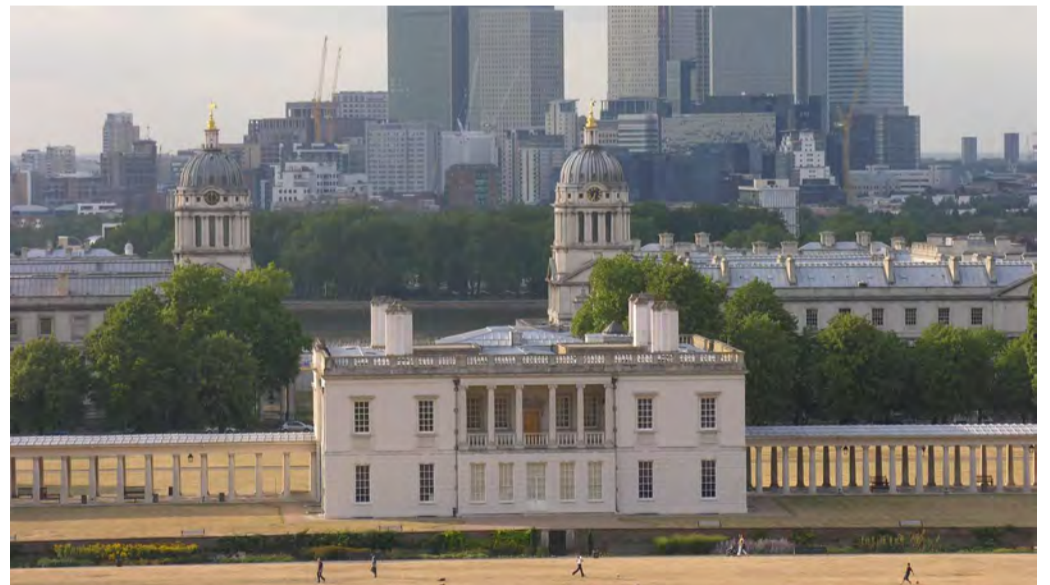
Teaching takes place via theoretical lessons and activities by students.



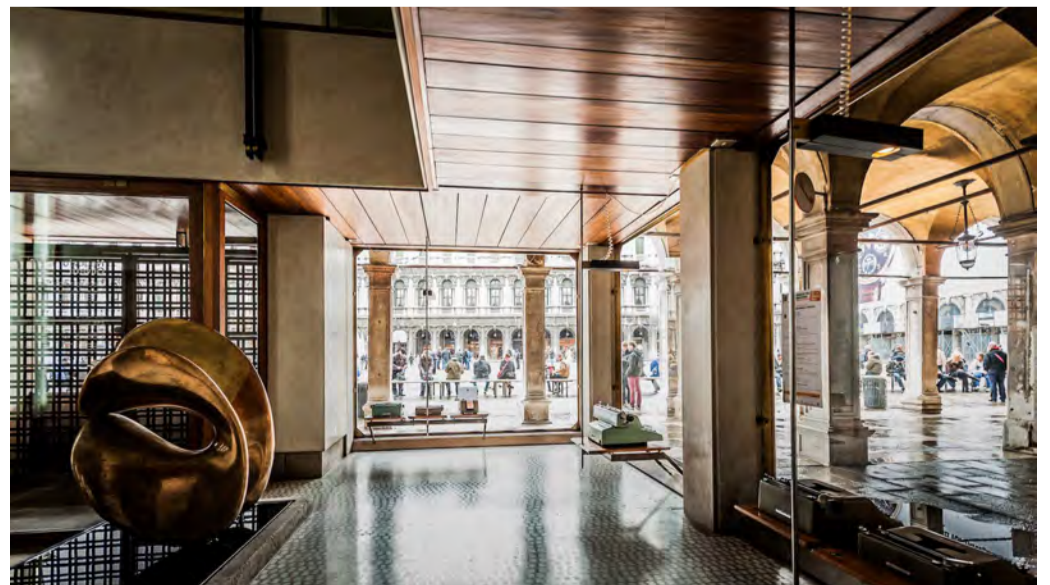
Cole\_Il sogno dell'architetto



Parigi di Haussmann





Greenwich\_Queen's House



Scarpa\_Negozi Olivetti

**Integrated Design Workshop. Building on Existing Buildings**  
**Laboratorio di progettazione integrata, costruire nel costruito (12 CFU)**

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-  Prof. Arch. Carmen Andriani
-  Prof. Arch. Alessandro Valenti

**PRESENTATION, OBJECTIVES AND CONTENTS**

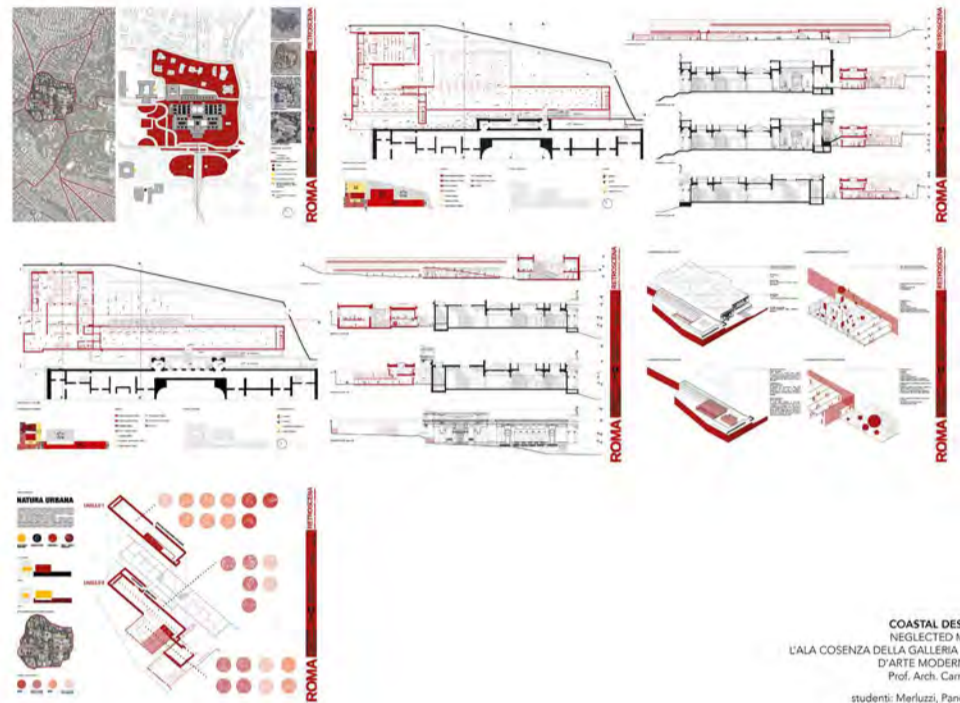
The workshop has as its objective the design resolution of a complex building or a finite system of buildings and the design exploration of forms and spaces inherent to interior architecture namely urban installations, the structures suitable for exhibitions, museums, interior design. Guided choice: Optional workshop concerning the architectural design and composition consisting of these modules:

**MODULE ON ARCHITECTURAL AND URBAN PLANNING (10 university credits)**

The objective is the teaching of architecture from the point of view of architectural and urban design, understood as an activity of formal, functional and constructive synthesis of the various disciplines, humanities and technical-scientific, which contribute to the building activity and its relationship with the context in an interrelated and multiscale vision of environmental regeneration.

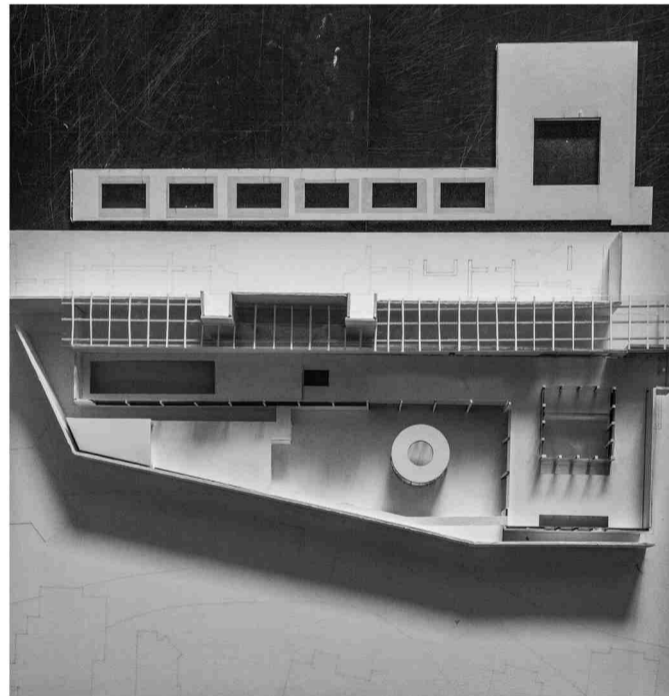
**URBAN INTERIORS (SETTINGS, TEMPORARY EXHIBITIONS, PUBLIC ART) (2 university credits)**

The goal of Interior Architecture is the design exploration of forms and spaces inherent to interior architecture or urban settings, that is the structures suitable for exhibitions, curatorial and exhibition activities, the relationship between art and public spaces.



Merluzzi\_Panozzo\_Segura\_A.A. 2020-2021

a.a. 2020/21  
**COASTAL DESIGN LAB #7**  
 NEGLECTED MODERNISM  
 L'ALA COSENZA DELLA GALLERIA NAZIONALE  
 D'ARTE MODERNA DI ROMA  
 Prof. Arch. Carmen Andriani  
 studenti: Merluzzi, Panozzo, Segura



Celle\_Cuvato\_A.A. 2020-2021

a.a. 2020/21  
**COASTAL DESIGN LAB #7**  
 NEGLECTED MODERNISM  
 L'ALA COSENZA DELLA GALLERIA NAZIONALE  
 D'ARTE MODERNA DI ROMA  
 Prof. Arch. Carmen Andriani  
 studenti: Celle, Cuvato





**Design, Technology and Environment Workshop**  
**Laboratorio di progetto, tecnologia e ambiente (12 CFU)**

Torna all'indice ☰

👤 Prof. Arch. Adriano Magliocco

👤 Prof. a.c. Enrica Cattaneo

PRESENTATION, OBJECTIVES AND CONTENTS

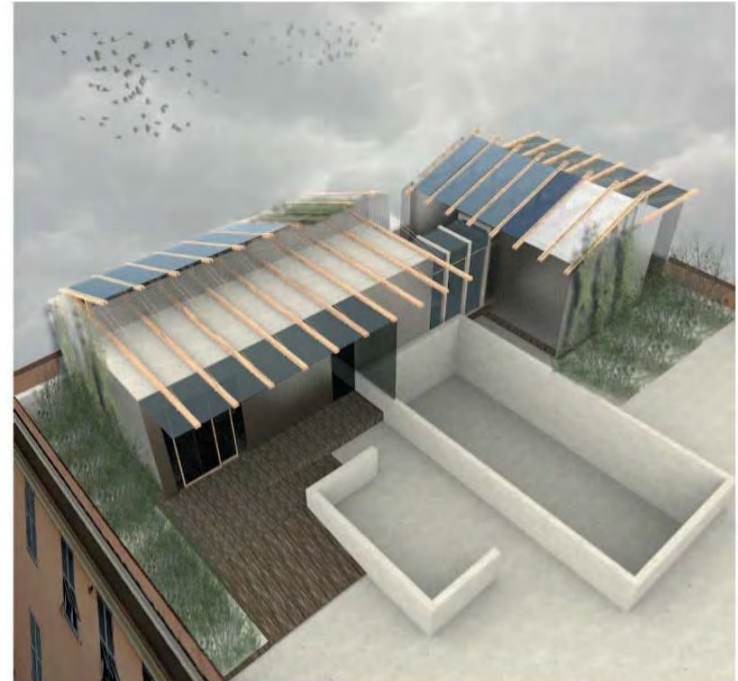
Guided choice: Optional workshop concerning technological and environmental design, consisting of these modules:

MODULE ON ARCHITECTURAL TECHNOLOGY (10 university credits)

The objective of the module is to focus attention on the environmental assessment of the Architectural project in its various components, in order to relate the choices deriving from functional requirements and expressive will to the control of the impact on the environment of the construction activity. Through the development of a theme regarding the building scale, the main areas of influence are analyzed: characteristics of the site, application of the principles of bioclimatic design and microclimatic management of the building, selection of materials, use of renewable energy sources in addition to the identification of the structural system.

MODULE ON TECHNOLOGY AND THE ENVIRONMENT (2 university credits)

The workshop, through a designing experience, aims at focusing attention on the relationships that exist between the definition of the functional and formal requirements of architecture and the effects on the environment, under different aspects: indoor and outdoor environmental comfort, use of material resources and renewable and non-renewable energy, environmental quality and human health.



Guasco\_Orlanno\_Puppo\_A.A. 2019-2020



Guasco\_Orlanno\_Puppo\_A.A. 2019-2020





Guasco\_Orlanno\_Puppo\_A.A. 2019-2020



Guasco\_Orlanno\_Puppo\_A.A. 2019-2020

**Design Workshop for the Restoration and Enhancement of the Cultural Heritage** Torna all'indice   
**Laboratorio di progettazione per il restauro e la valorizzazione del patrimonio culturale**(12 CFU)

-  Prof. Arch. Stefano Francesco Musso
-  Prof. Ing. Stefano Podestà

**PRESENTATION, OBJECTIVES AND CONTENTS**

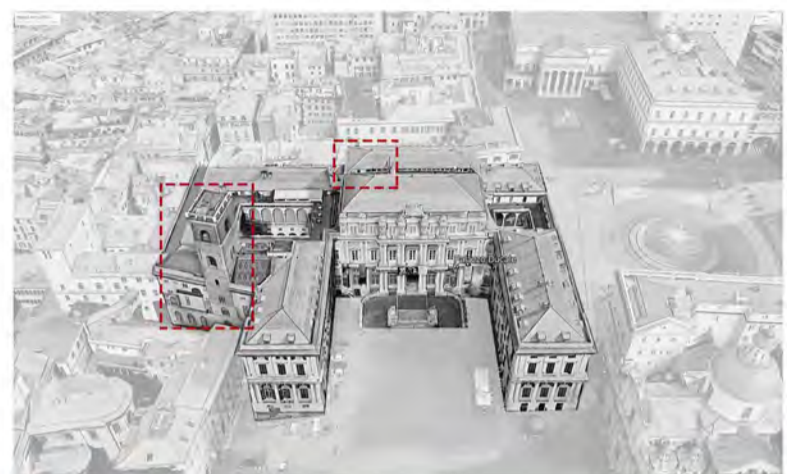
The Workshop offers an integrated experience of design in the field of the protection, conservation, restoration and enhancement of the architectural heritage of Interest and Cultural value. Guided choice: Optional workshop on restoration design, consisting of Restoration and Structural Consolidation modules.

**MODULE ON RESTORATION (10 university credits)**

The module aims at guiding students towards the acquisition and development of the competences and technical skills necessary for the preparation of a definitive (final working plan) project in restoration, complete with all of the analytical and preventive diagnostic elements, technical-design elements and those of an administrative nature necessary for its implementation on site. The course will make use of specialist contributions to provide students with technical-practical knowledge relating to the sectors of possible intervention: from structures to systems, from surface treatment to the solution of accessibility and safety problems.

**MODULE ON STRUCTURAL CONSOLIDATION (2 university credits)**

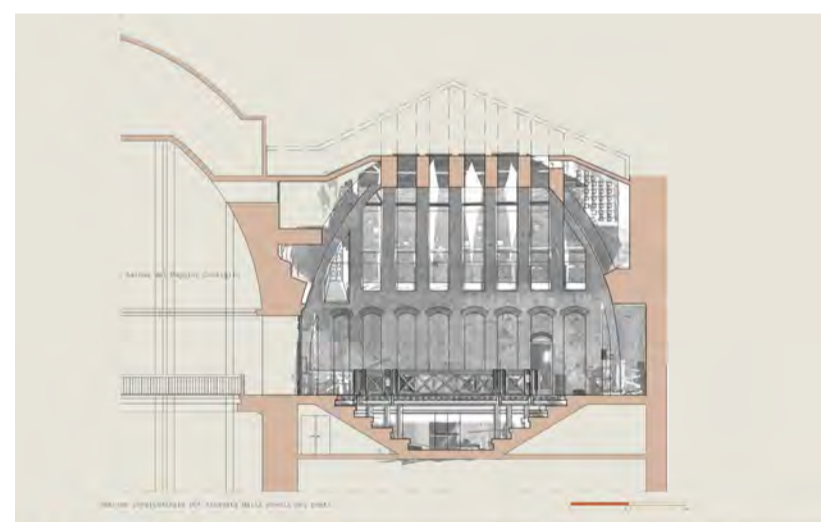
The objective of the module is to provide the critical and analytical tools necessary to be able to choose, apply and coordinate the various techniques of intervention from the preliminary design to the final working plan of the project of restoration.



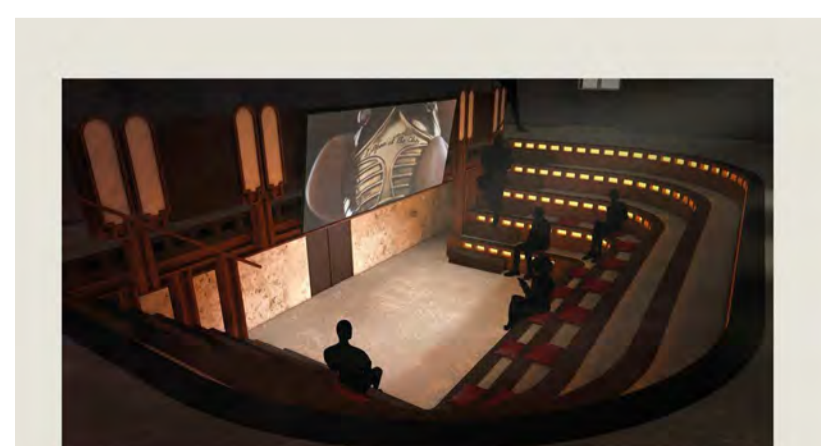
**PALAZZO DUCALE GENOVA**  
 INQUADRAMENTO  
 Committenza: Fondazione Palazzo Ducale per la Cultura  
 Studenti: Andrea Acquavigna, Silvia Anzani, Maddalena Carobio, Filippo Buraglio, Romita Fiamma, Elena Liguori, Caterina Lupi, Beatrice Marini, Nicola Moroni, Marco Ramponi, Andrea Rulli



**PALAZZO DUCALE GENOVA**  
 PROGETTO - TORRE GRIMALDINA  
 LABORATORIO DI RESTAURO ARCHITETTONICO - PROF. S. F. MUSSO - A.A. 2019-2020 -  
 Studenti: Eugenio Claudio Campi Marco D. Carlini Daniele, Delfini Virginia, De Paoli Charlotte, Nanni Maud, Montepalà Sara, Pavesi Francesca, Rossi Marco S., Sobrero Eri



**PALAZZO DUCALE GENOVA**  
 SOTTOTETTO DEL SALONE DEL MINOR CONSIGLIO  
 LABORATORIO DI RESTAURO ARCHITETTONICO - PROF. S. F. MUSSO - A.A. 2019-2020 -  
 Studenti: Eugenio Claudio Campi Marco D. Carlini Daniele, Delfini Virginia, De Paoli Charlotte, Nanni Maud, Montepalà Sara, Pavesi Francesca, Rossi Marco S., Sobrero Eri



**PALAZZO DUCALE GENOVA**  
 PROGETTO - SOTTOTETTO DEL SALONE DEL MINOR CONSIGLIO  
 LABORATORIO DI RESTAURO ARCHITETTONICO - PROF. S. F. MUSSO - A.A. 2019-2020 -  
 Studenti: Eugenio Claudio Campi Marco D. Carlini Daniele, Delfini Virginia, De Paoli Charlotte, Nanni Maud, Montepalà Sara, Pavesi Francesca, Rossi Marco S., Sobrero Eri

**Workshop on Advanced Urban Planning and New Habitats**  
**Laboratorio di urbanistica avanzata e nuovo habitat (12 CFU)**

Torna all'indice ☰

👤 Prof. Arch. Manuel Gausa Navarro

👤 Prof. Arch. Adriana Gherzi

PRESENTATION, OBJECTIVES AND CONTENTS

Guided choice: Optional workshop oriented towards multi-scalar, urban planning and landscape design, consisting of the following modules:

MODULE ON ADVANCED URBAN PLANNING (8 university credits)

The goal of the workshop is the acquisition of knowledge, skills and criteria suitable for the contemporary challenges and transformations of the city, the territory, the environment and the landscape. The course aims at assuming urban design in a strategic and transversal logic with respect to contemporary urban and territorial scenarios. In this perspective, the project becomes a “multi-scalar” tool to be seen as a transversal interpretative factor among City-Architecture-Landscape, considered in their analytical-synthetic value.

MODULE ON THE ANALYSIS OF AND STRATEGIC PROJECT FOR THE LANDSCAPE (8 university credits)

We aim at presenting a synthesis of the methods of analysis, interpretation and design of landscape architecture with the goal of promoting the knowledge of different approaches, methods and techniques for the analysis and design of the landscape itself, understood as an eco-system and as a multi-scalar scenario. The key element of the course will be the public space understood as an active, productive and social space in its relations with the new multidisciplinary condition of the contemporary city. The course will make use of the collaboration of the Geo-Morfo-Lab.



PROSPETTIVA GENERALE  
Visto Sud - Est



## Technological Design for Existing Buildings Progettazione tecnologica per il costruito (8 CFU)

Torna all'indice ☰

👤 Prof. Arch. Giovanna Franco

👤 Prof. a.c. Marta Casanova

### PRESENTATION, OBJECTIVES AND CONTENTS

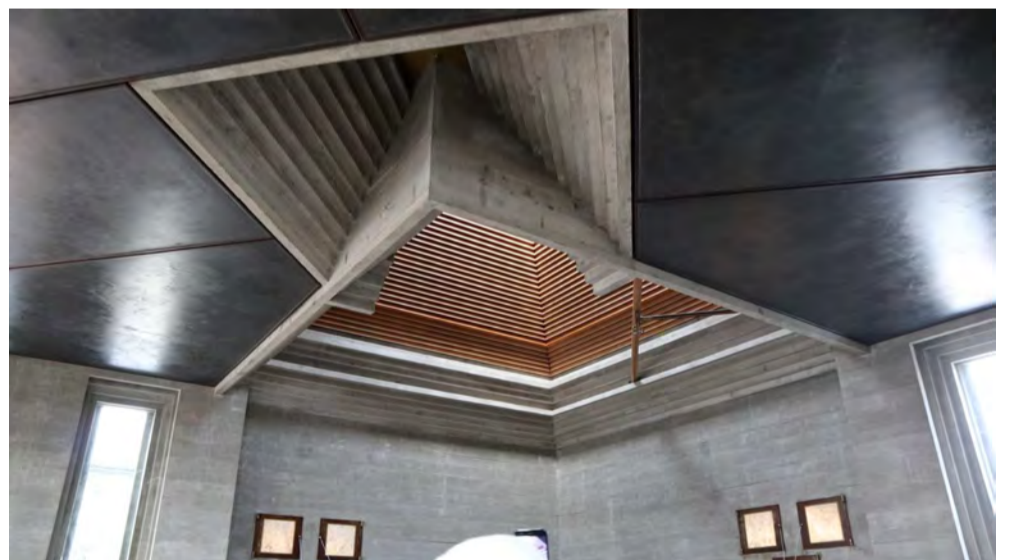
The course makes an in-depth study of the specialist knowledge necessary to correctly and responsibly set up a project of recovery and reuse, starting from the understanding of the construction methods, the main phenomena of the deterioration, instability and functional deficiencies of existing buildings, also with reference to environmental issues and energy saving. Guided choice: The optional course on Planning for the restoration and enhancement of the cultural heritage is divided into two modules:

#### MODULE ON TRADITIONAL MASONRY BUILDINGS (5 university credits)

The module makes an in-depth study of the knowledge of construction principles and rules, pathologies, phenomena of deterioration and deficiencies of traditional load-bearing masonry buildings, as well as their energy behavior and eventual techniques for restoration and consolidation.

#### MODULE REGARDING REQUALIFICATION AND REUSE OF RECENT HERITAGE (3 university credits)

The module explores the problems of redevelopment and reuse of the recently built heritage of Twentieth century architecture. Particular attention is devoted to construction episodes considered to be of greatest value, Heritage of the Modern, which require maintenance, conservation, reuse and redevelopment, also being attentive to the values that these kinds of architecture express.



## Environmental sustainability in the architectural project Sostenibilità ambientale nel progetto di architettura (8 CFU)

Torna all'indice 

 Prof. a.c. Maria Canepa

### PRESENTATION, OBJECTIVES AND CONTENTS

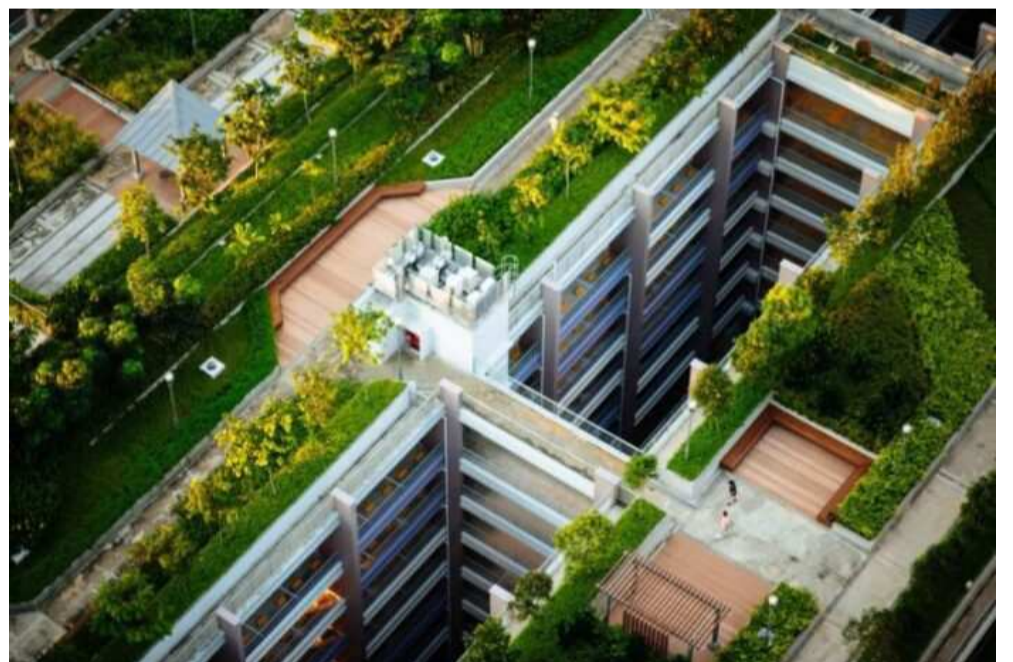
Guided choice: Optional teaching on design and environmental technology, consisting of the following modules:

#### MODULE ON ENVIRONMENTAL SUSTAINABILITY (4 university credits)

The objective of the module is to provide basic knowledge relating to the evolution of the environmental problem in its various components - limited resources, pollution, use of renewable energy sources - and its effects on land management, architectural design and construction procedures.

#### MODULE ON BIOCLIMATIC TECHNOLOGIES (4 university credits)

The goal is to make an in-depth study of the knowledge of materials and passive and active technologies for the control of environmental quality in architecture.



## Urban Planning and Innovation Urbanistica e innovazione (8 CFU)

Torna all'indice 

 Prof. Arch. Giampiero Lombardini

### PRESENTATION, OBJECTIVES AND CONTENTS

The aim of the course is to provide a theoretical framework regarding the approaches used today in the processes of urban-territorial transformation and to proceed with the tools of simulation, to the analysis of concrete cases.

Guided choice: Optional course, with an international orientation, consisting of the following modules:

#### MODULE ON URBAN THEORY AND INNOVATION (4 university credits)

The module introduces urban planning through the fundamental elements of the discipline. Starting from a solid technical-operational basis, the module will carry out a series of morphological-spatial, economic and social simulations on the territories of the contemporary city, reconstructing an exercise in evaluation of the potential outcomes of urban transformation.

#### MODULE ON URBAN SYSTEMS AND NEW TECHNOLOGIES (4 university credits)

The module is aimed at acquiring an awareness of the processes of transformation that affect the city and the territory starting from new technologies and a substantially informational approach. The module provides basic knowledge of the theory and practice of urban planning as well as the skills and new profiles of the urban architect and introduces the reading and interpretation of the contemporary city.



**Theories, Practices and Procedures of the Architecture of Existing Buildings** (8 CFU)[Torna all'indice](#)  Prof. Arch. Massimiliano Giberti Prof. Arch. Vittorio Pizzigoni**PRESENTATION, OBJECTIVES AND CONTENTS**

The course pursues the transmission of the theory, techniques and procedures of completed and/or feasible architecture, both modern and contemporary, in order to provide useful elements for the knowledge of the process of construction, as a formal synthesis of all specific aspects; as a detailed study and as a unitary and integrated design of both the architectural exteriors and interiors. It is divided into two modules: The construction Site, from the procedures to the realization of the architectural form and The Construction of Contemporary Interiors.

The first module explores the theory, principles and methods of the relationship among form, structure and technical systems in defining the form of the architectural project up to the phases of construction and the construction site. Particular attention is paid to modern and contemporary concrete works, following the evolution of patents and consequent technologies.

The second module explores the theory, principles and methods of creating interior architecture as a spatial resolution of the work, with an investigation into the innovative materials that make its creation possible.

## Coastal design and others extreme environments (6 CFU)

Torna all'indice ☰

👤 Prof. Arch. Matthew Hamilton Rice

### PRESENTATION, OBJECTIVES AND CONTENTS

The scope of this course in coastal design and urban architecture is to develop a design process and project proposal that:

- is clearly urban, architectural and architectonic,
- establishes networks of public space where city meets water,
- responds to environmental events and changing climatic conditions,
- allows change over time by having a permanent 'infrastructure', temporary infill, and ephemeral elements.

The student will conduct basic research and form a reasonable design response that is integral to the architectural proposal involving:

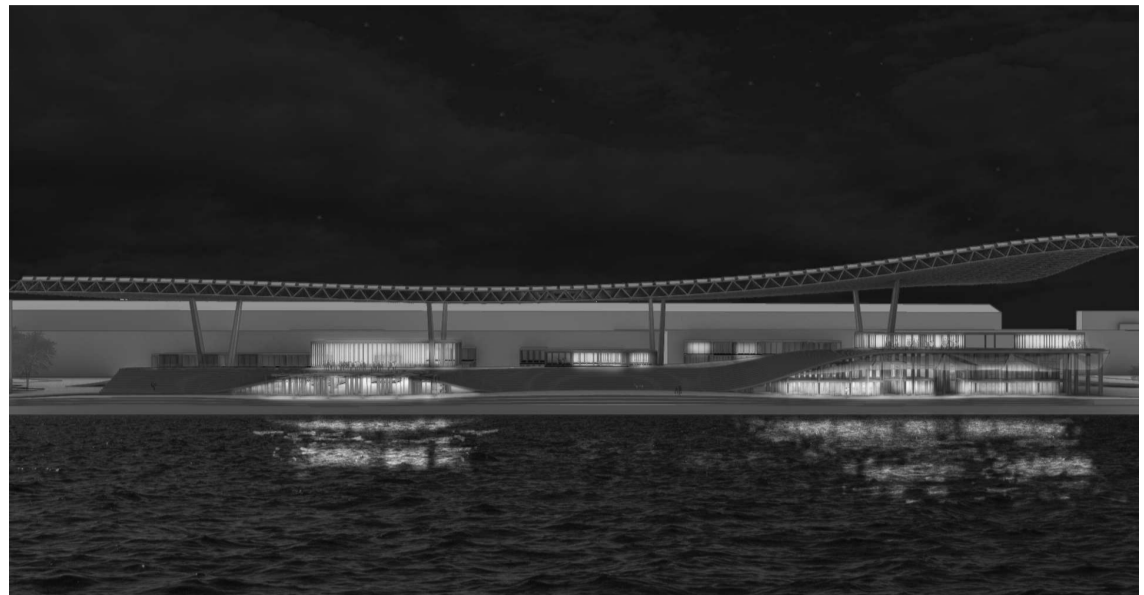
- sea level rise
- sun shading and wind protection of facade
- generally sustainable material choice/use

The learning process depends on steady work in regular steps: research, schematic approaches, development of urban strategy, development of architectural strategy, development of architectural responses to environmental events and climate change.

Students will develop architectural proposals responsive to change, including day-night, summer-winter, and programmatic changes over longer periods of time. The work will be carried out through digital models (and some diagrams and freehand drawing) using Rhinoceros software. The digital model is to be organized to demonstrate the logic and hierarchy of the design proposal, from diagrammatic and schematic to its final form. Visualization and representation of the design ideas and process will be key to the evaluation of the course. Students will learn quick methods of visualization using Rhinoceros and Adobe Photoshop software, and no further rendering software will be used. Students will develop ability with diagrammatic, orthographic, parallel (isometric and true axonometric) and perspective projection.

### INTERNATIONAL INTERACTION

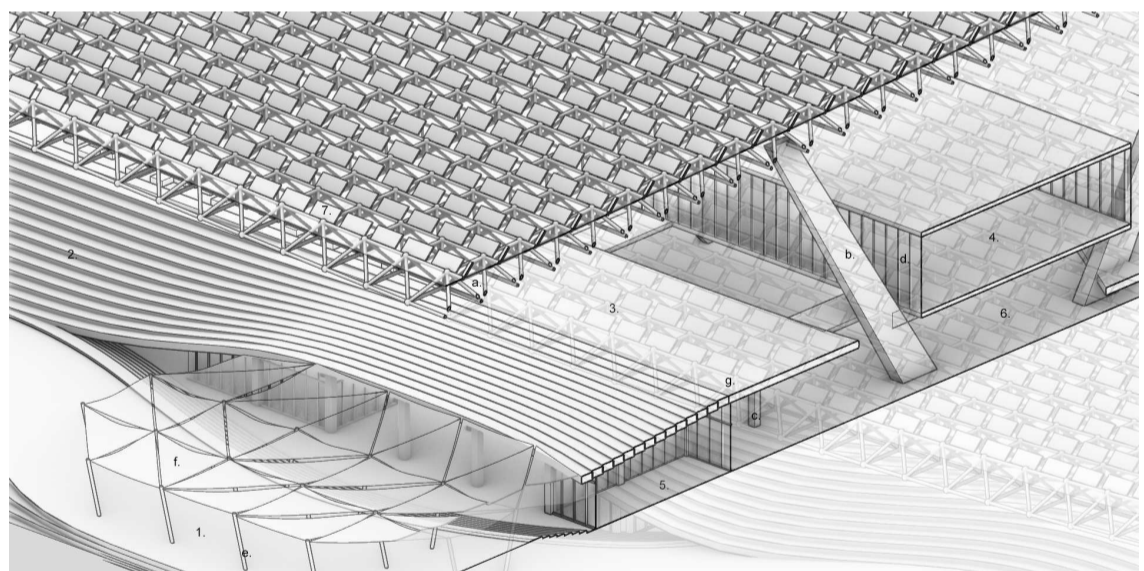
For Fall 2021 an online activity is planned with professors and students of Florida International University to develop a component of the overall design.



Kociolek Micolaj \_A.A. 2019-2020



Estrela Capistrano, Belen Salgado\_A.A. 2019-2020



Kociolek Micolaj \_A.A. 2019-2020



Lisowska, Piatek\_A.A. 2019-2020



## Design Integrated with the B.I.M. Method Progettazione integrata con metodo B.I.M. (6 CFU)

Torna all'indice

Prof. Ing. Arch. Giorgio Mor

Dott. Maurizio Bertagna

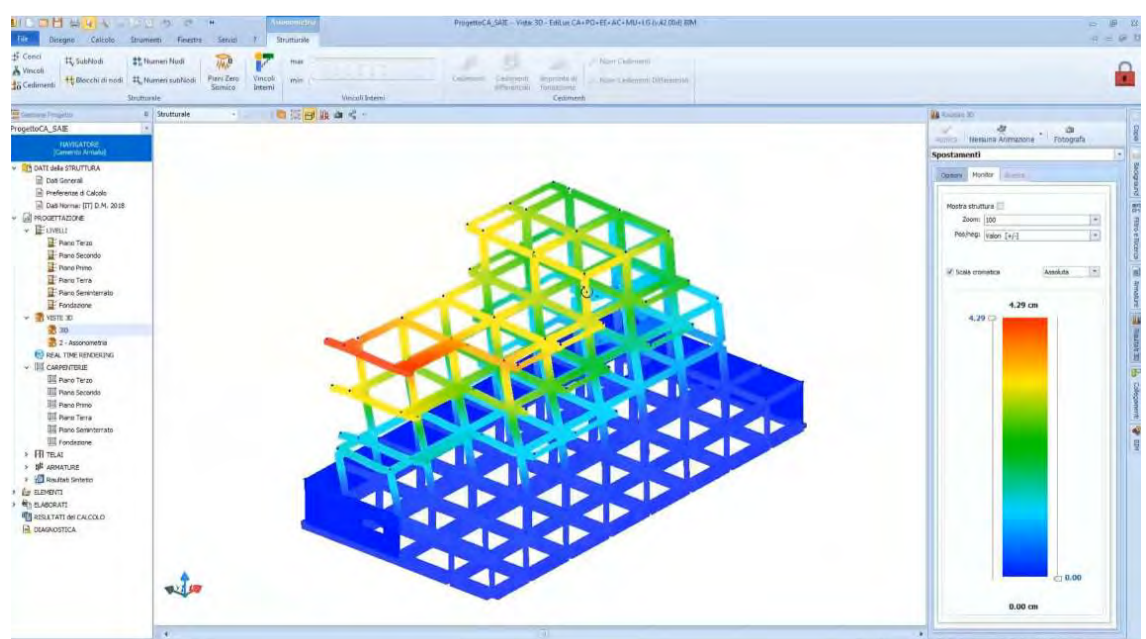
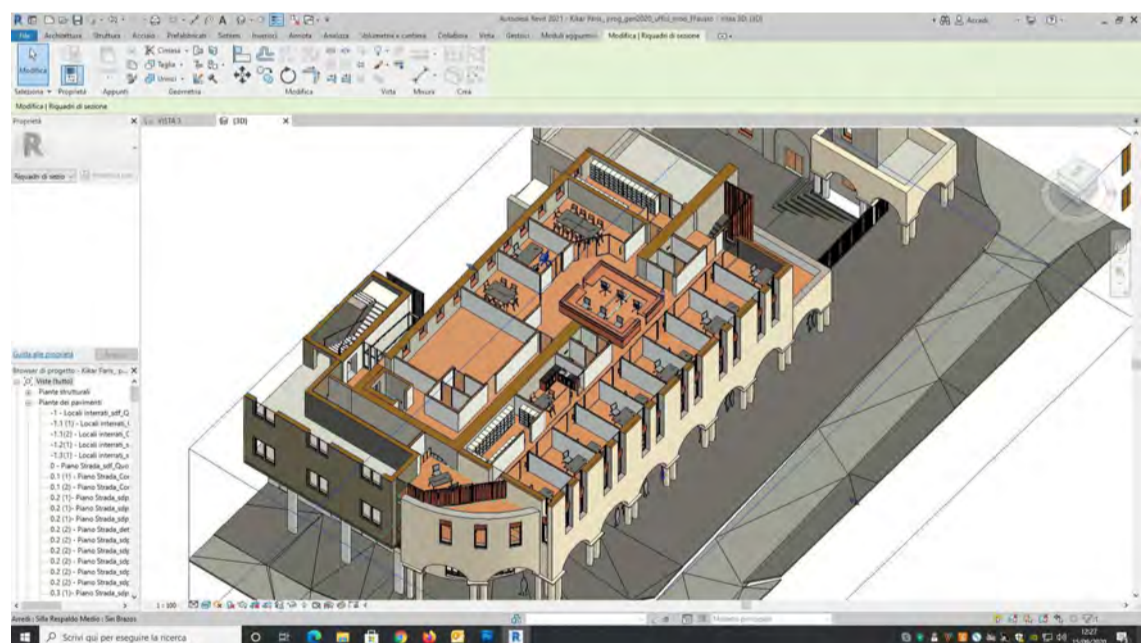
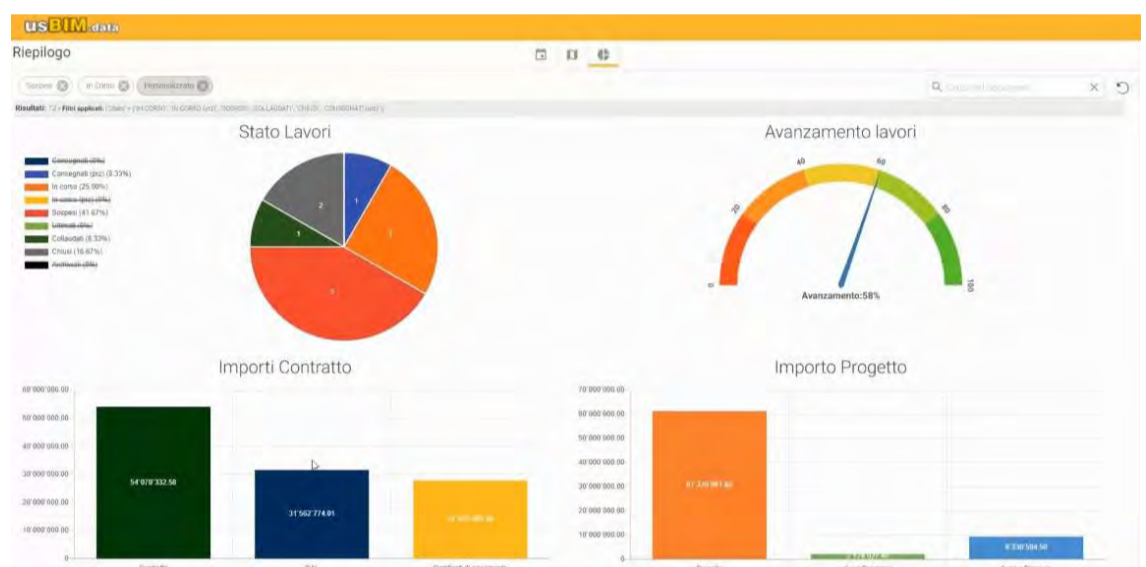
### PRESENTATION, OBJECTIVES AND CONTENTS

Through the B.I.M. systems it is possible to anticipate most of the choices that are usually made on site, during the phases of execution, to the early phases of design; this new method of operating thus makes it possible to obtain greater quality control, in terms of phases and execution times and, consequently, of production costs.

The B.I.M. method, in fact, involves all the players in the construction process such as the client, designers and other professionals, construction companies, end users and maintenance workers.

During the theoretical-methodological lessons the student is presented with the peculiarities of an integrated path of design, analyzing the relationships and the consequentiality between the project of technical and economic feasibility, the final and working project (typical phases of the design of public works, but not only) in its architectural, structural and system components, without neglecting the knowledge obtained from the economic and legal fields.

Through practical experiments, the student acquires the ability to design in a B.I.M. environment in n Dimensions (nD) associating costs, execution times, management, maintenance and more to the three geometric dimensions. Moreover, the suitable software and related innovative tools and methods related to the concept of interoperability are illustrated, L.O.D. (Level of Detail), L.O.I., model checking, clash detection, which make it possible to achieve a high level of control of the entire construction process.



## Interior Architecture Architettura degli interni (6 CFU)

Torna all'indice ☰

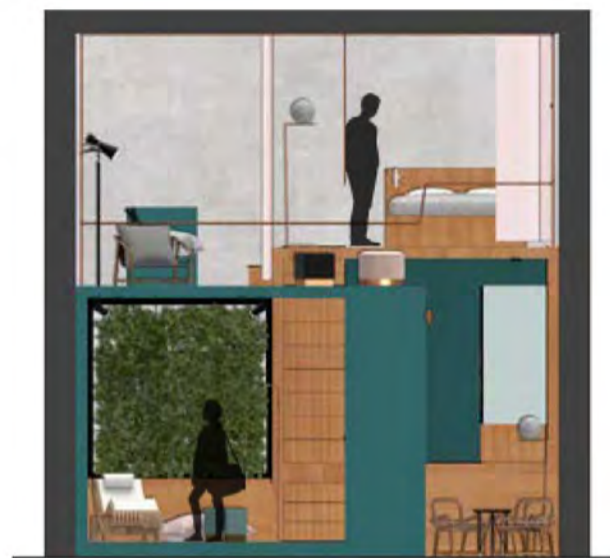
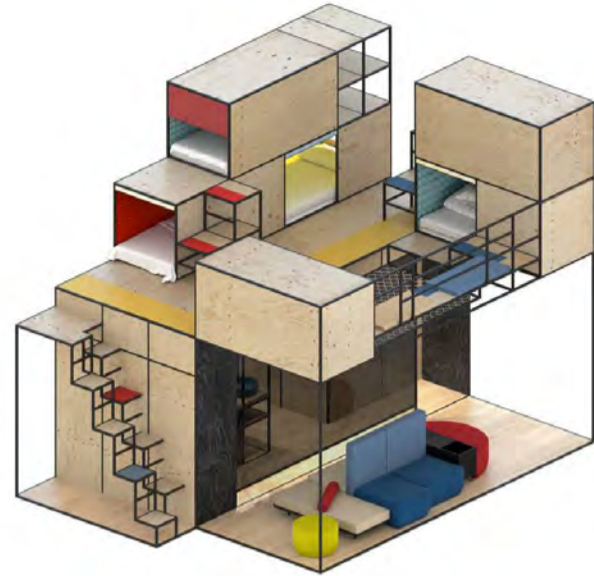
👤 Prof. Arch. Alessandro Valenti

### PRESENTATION, OBJECTIVES AND CONTENTS

The course focuses on contemporary experiments in the field of interior design applied to highly topical issues such as those of the reuse and restyling of the heritage of existing buildings.

Attendance and participation in the proposed training activities (lectures and group exercises), combined with the individual study of the recommended texts, will allow the student to:

- deal with the issues of contemporary interior design, acquire information regarding the protagonists of design and interior architecture, learn about and select brands of excellence, read and decode the most recent projects on the international scene;
- gradually become acquainted with the field of hôtellerie, with the study of the target audience, the choice of furnishings and the satisfaction of both aesthetic and functional performance;
- learn and experiment with the techniques of reuse and reactivation that lead to the definition, in the field of interior design, of new models of accommodation;
- be able to apply the acquired knowledge and use the necessary tools aimed at designing a micro space studied and set up taking care of the smallest detail, taking into account the control of light, the role of colour, the characteristics of the materials, the ergonomics of the shapes, sustainability and well-being.



## Contemporary Landscape Architecture Architettura del paesaggio contemporanea (6 CFU)

Torna all'indice ☰

👤 Prof. Arch. Francesca Mazzino

### PRESENTATION, OBJECTIVES AND CONTENTS

The course focuses on the evolution of the landscape architecture of the nineteenth and twentieth centuries and aims at developing skills of critical interpretation of landscape projects (conceptual principles, cultural trends, aesthetic theories and social contexts that determined the design of important works of contemporary landscape architecture). The course provides theoretical-methodological tools to:

- develop conceptual ideas on a design theme, assigned from time to time, identifying cultural references drawn from the visual arts, architecture and design;
- apply the knowledge on plant species and the related needs in relation to the maintenance of landscape composition;
- become familiar with construction materials and techniques also considering the construction and management costs;
- get to know and use effective representation tools.

The following topics are presented and discussed during the course: the importance of the role of landscape and gardens for the conservation of biodiversity and for the improvement of living conditions in contemporary cities; soil covering with plant or inert materials, choice of tree and shrub species with environmental and ecological functions, low-maintenance perennial herbaceous species, bulbous plants to be naturalized, water elements, paths and permeable paved areas.

Students will develop a project proposal by participating in a national or international competition.



## Architecture and the Medieval city in the Mediterranean and in the Islamic World

Torna all'indice ☰

### Architettura e città medievale nel mediterraneo e nel mondo islamico (6 CFU)

 Prof. Arch. Alireza Naser Eslami

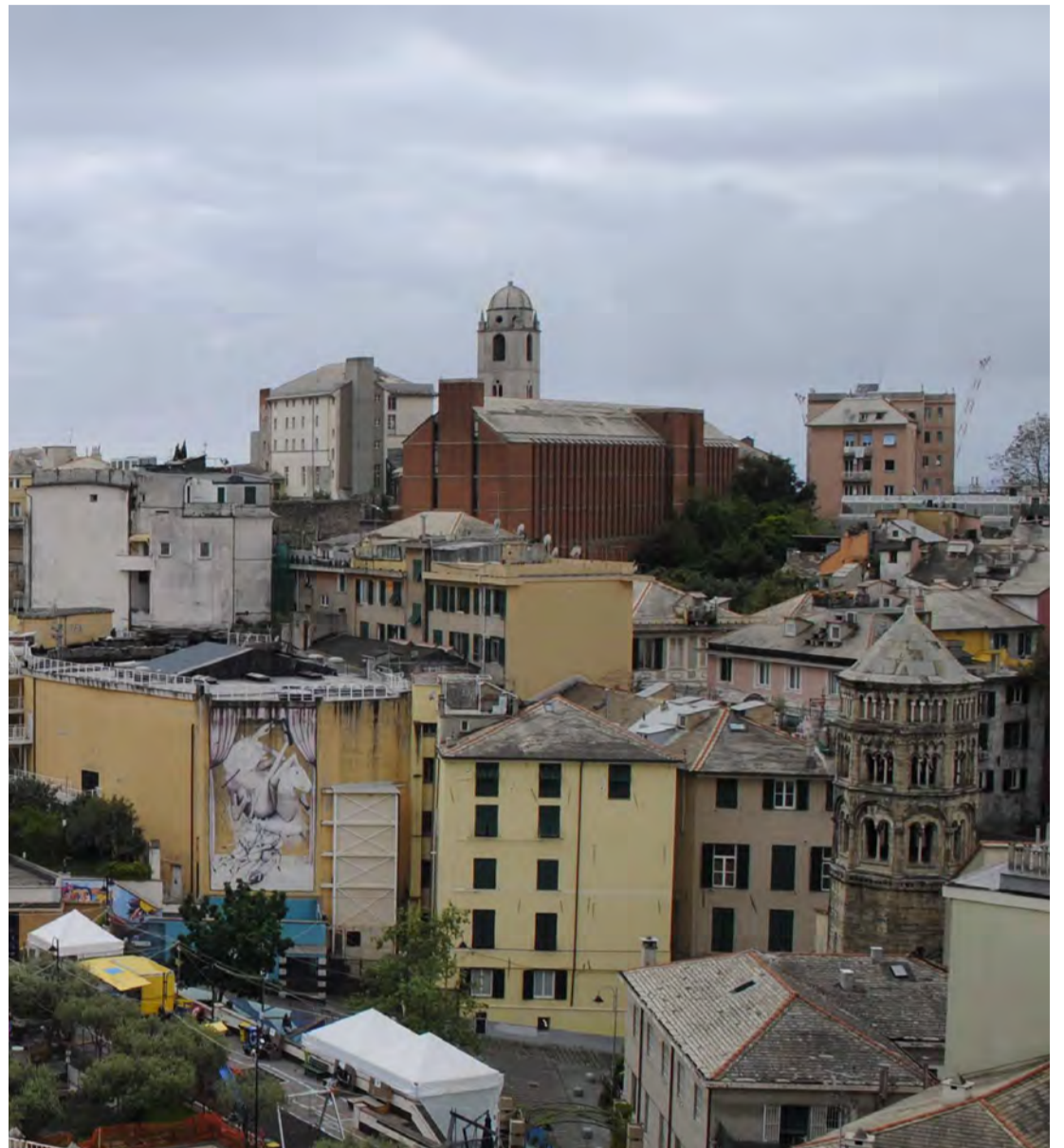
#### PRESENTATION, OBJECTIVES AND CONTENTS

The course introduces the student to the historical knowledge of the architecture and urban spaces of the Islamic world in its artistic relations with Mediterranean Italy, from the seventh to the seventeenth century.

The course is divided into a cycle of lessons, concerning the central themes of the history of Islamic architecture. Seminar on in-depth studies are also planned, even with the participation of external specialists.

The lectures will focus on the fundamental themes of Islamic architecture and its relations with Mediterranean Italy, and in particular, the most significant examples of Arab-Norman architecture in southern Italy, and the artistic interactions with the Italian maritime city-republics will be analyzed such as Genoa, Pisa, Amalfi and Venice.

In addition, there is an educational research activity developed by the student who, after choosing a topic - in agreement with the teacher who will provide the relevant bibliography - he/she is required to draw up a historical-critical report.



## Diagnosis, Design and Energy Certification of Buildings

### Diagnosi, progettazione e certificazione energetica degli edifici (6 CFU)

Torna all'indice ☰

👤 Prof. Ing. Stefano Bergero

#### PRESENTATION, OBJECTIVES AND CONTENTS

In the European Union, the civil sector is responsible for about 35% of the energy consumption, contributing significantly to greenhouse gas emissions.

Since 2002, the Union legislation has introduced a policy attentive to the issue of energy saving in buildings, implemented at the national level.

Technical legislation has met this need by promoting procedures and methods aimed at uniformly calculating the energy performance of the buildings.

The course aims at providing the student with knowledge on the energy performance of buildings with particular reference to current legislation and technical regulations.

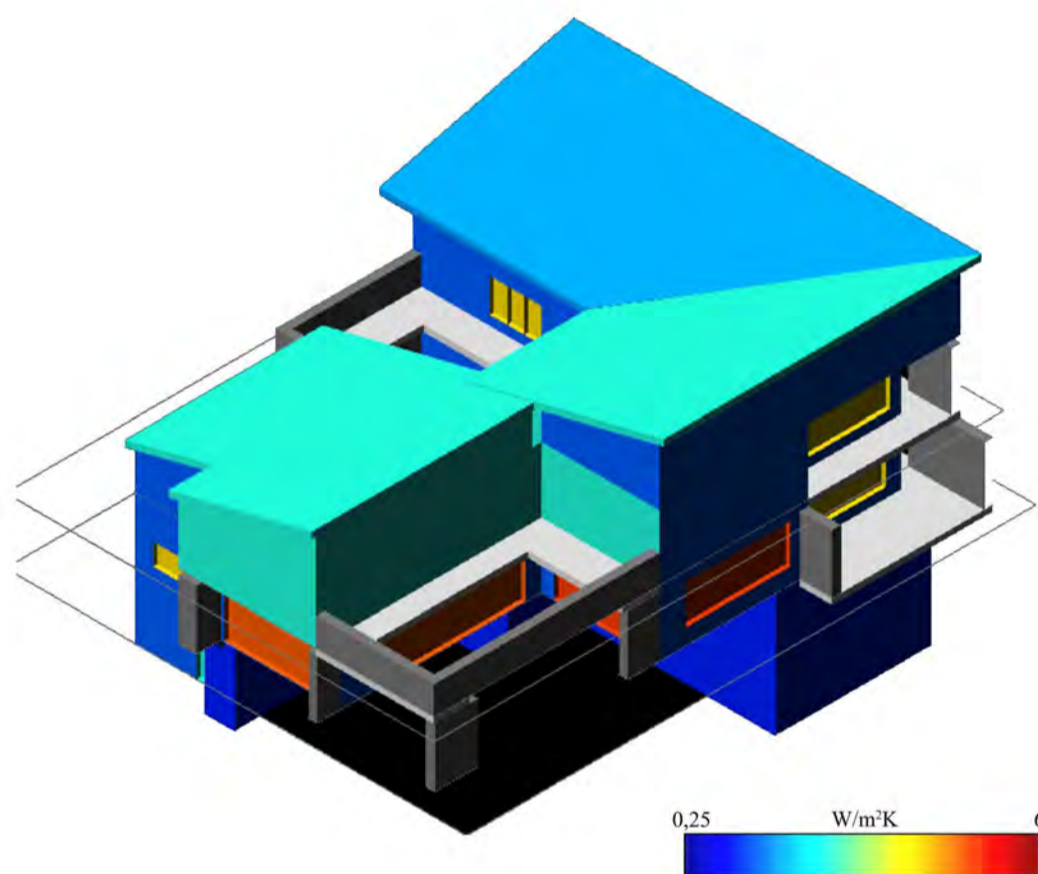
Also dealt with are aspects concerning the energy diagnosis of the existing buildings, the minimum performance requirements that new buildings or buildings undergoing major renovations or energy redevelopments must possess and, finally, the energy certification of buildings.

The course involves applying the knowledge acquired to a real case study through the use of commercial software. At the end of the teaching activity, the student must be able to create an energy model of a building and to evaluate the main parameters that affect its energy performance.

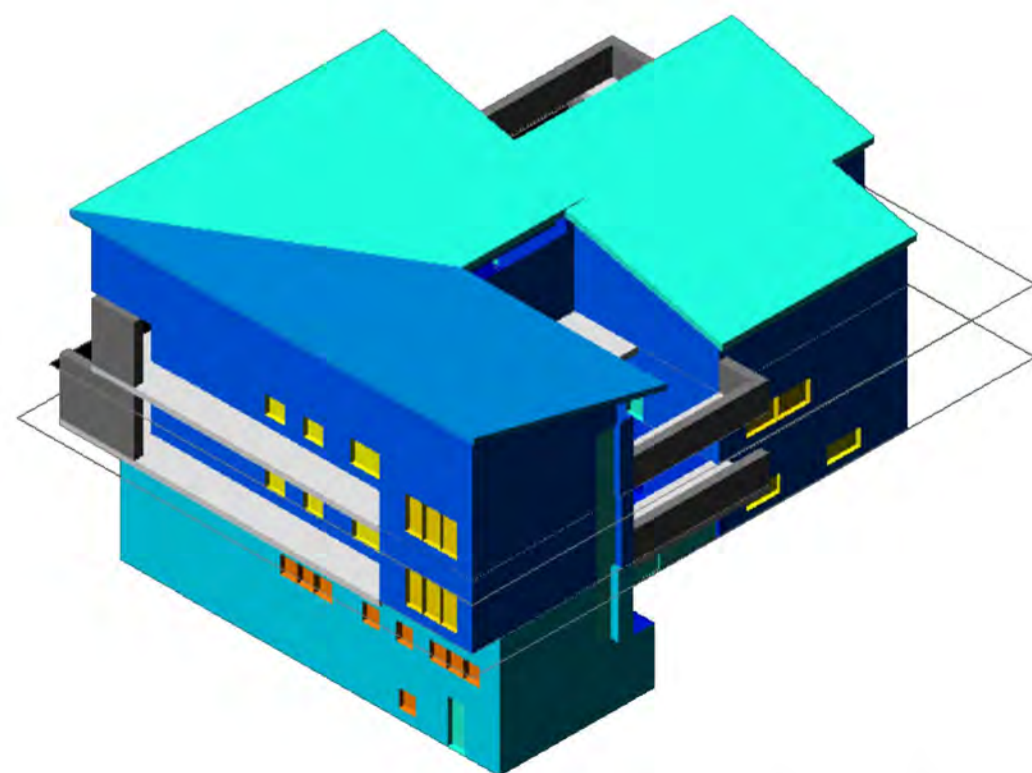
The exercises will deal with the analysis and diagnosis of a real case study.



Davide Desideri



Davide Desideri



VERIFICHE DI LEGGE

Davide Desideri

## Ecology for the Territorial Project Ecologia per il progetto di territorio (6 CFU)

Torna all'indice ☰

👤 Prof. Arch. Roberto Bobbio

👤 Prof. Dott. Paolo Vassallo

### PRESENTATION, OBJECTIVES AND CONTENTS

Understanding ecology and understanding the know-how regarding ecology is absolutely necessary for addressing the environmental issues that are raised today for those involved in land and architecture; it provides tools for understanding, evaluating and intervening in biotic relationships and in energy exchanges between living beings and inanimate matter. Ecology and urban planning find complementarity in the design of the built-up space, in the governance of the territory, in the construction of shared choices by communities that are deciding on their own future.

The course is integrated, consisting of the modules: Elements of Ecology and Urban Planning and the Environment, and is aimed at teaching the future designer to consider and address the environmental implications of the land project and that of built-up space.

In particular, the module regarding elements of ecology aims at providing solid basic knowledge on the structure and functioning of the natural systems, with particular emphasis on the mechanisms that determine both the distribution and abundance of organisms and their relationships with the environment. This module aims at introducing students to the study of the main applications of ecology by understanding the characteristics of the environmental components with particular reference to the effects of human-induced alterations on the environment.

The module on urban planning and the environment aims at developing in the designer an awareness of the complex relationships between the environment and settlement systems, the ability to recognize them, evaluate them critically and deal with them using design techniques and tools.

The integration of the two modules is achieved through practical application in which there is a convergence of the teachings that were provided separately in the two modules.



## Geomorphology for the Landscape Project Geomorfologia per il progetto del paesaggio (6 CFU)

Torna all'indice ☰

👤 Prof. Dott. Gerardo Brancucci

### PRESENTATION, OBJECTIVES AND CONTENTS

The course aims at helping the student acquire techniques of geomorphological analysis with the aid of GIS tools.

To this end, part of the course is devoted to illustrating the operation of open source GIS software (Grass and Qgis) and their interfaces with advanced tools such as Google Maps, open street maps and the like.

In fact, these tools, used more and more often in the professional field, cannot fail to be part of the technical/scientific background of a specialist on the territory.

‘Architecture alters the environment, consumes natural, human, technical and economic resources of the present, often taking for granted the future in irreversible ways’ (From an open letter from the Dean to the professors of the previous Faculty of Architecture).

The course takes place by means of lectures, exercises, field trips (when possible); the lessons are devoted to the following topics:

- fundamentals of geomorphological analysis of the territory;
- characterization of natural materials: rocks, ground and soils;
- fundamentals of territorial marketing (specialist seminar);
- GIS applications (seminars);
- relationships between a natural landscape and an anthropic landscape;
- geomorphological risk and hydrogeological instability;
- geological landscape as a resource.

## GEOMORFOLOGIA

Conoscere la Terra su cui vivi per progettare meglio



## Structural Morphology Morfologia strutturale (5 CFU)

Torna all'indice 

 Prof. Ing. Marco Lepidi

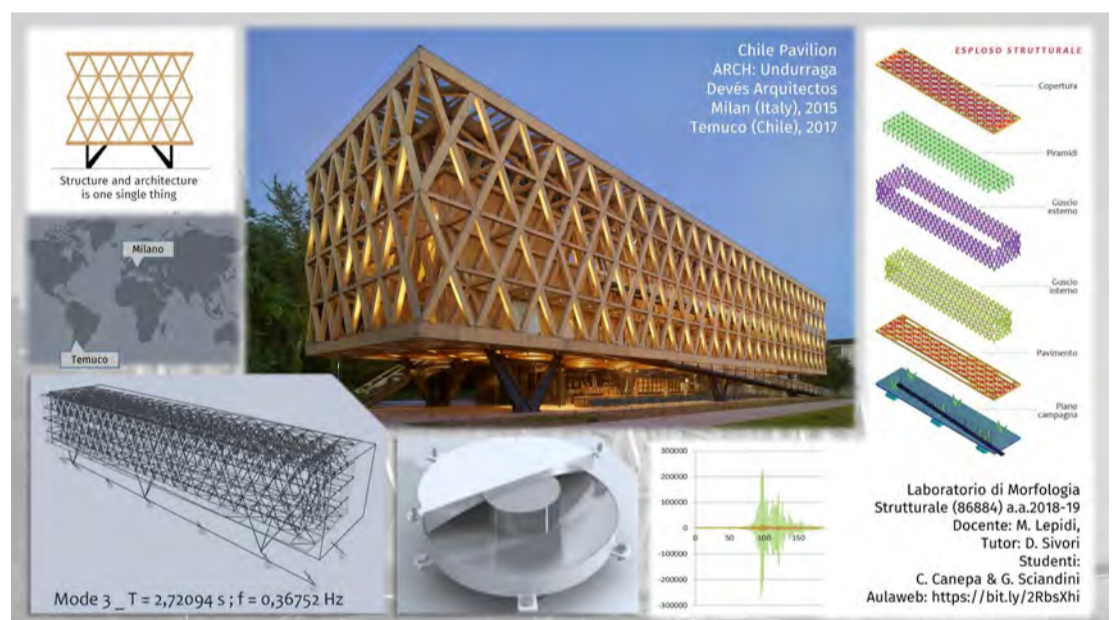
### PRESENTATION, OBJECTIVES AND CONTENTS

The course illustrates the relationships between principles of structural mechanics and forms of architecture. Traditional and innovative solutions are analyzed that make it possible to interpret and govern these relationships.

The lectures and workshop activities are aimed at developing the interpretative sensitivity and methodological skills necessary for understanding, evaluating and optimizing the symbiosis between formal success and structural performance in modern and contemporary architectural design, through geometric representation and the definition of qualitative and quantitative mechanical models).

The course aims at developing the ability to express the static and dynamic response of these models in parametric terms, to appreciate the dependence of the structural performance on the fundamental parameters of form and structure, to propose alternative design ideas aimed at solving any critical state of the performance.

The course consists of theoretical lessons and a design workshop. Students are required to write a paper (report and design tables) regarding the critical analysis of the structural morphology of a work of modern or contemporary architecture.





## Detailed Design Progettazione esecutiva (6CFU)

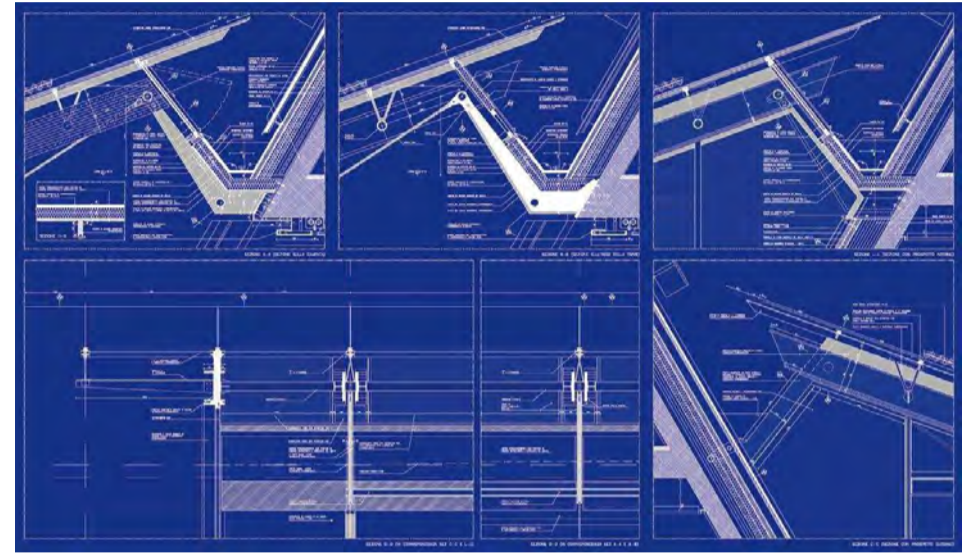
Torna all'indice ☰

👤 Prof. Arch. Renata Morbiducci

### PRESENTATION, OBJECTIVES AND CONTENTS

Detailed architectural design is the moment in which the creative and subjective component of the designer is combined with the technical and objective component of the rules and of the final knowledge of the working plan. In this process of achieving the design details, the current digitization tools are considered an operational enrichment, as they facilitate the integration among disciplinary domains.

The course aims at providing students with the methodological and technical knowledge that will allow them to develop a detailed architectural project, with particular reference to the building envelope in its dimensions of efficiency and economic feasibility. The development of the architectural project, up to the detailed working plan, will be carried out in a BIM (Building Information Modeling) environment.



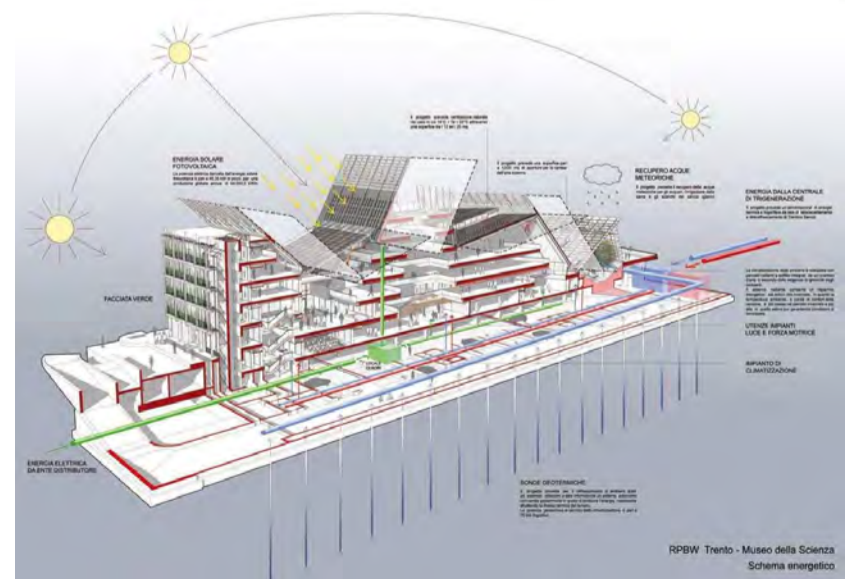
RPBV – Trento-Area Ex Michelin

Progetto di  
fattibilità

Progetto  
definitivo

PROGETTO  
ESECUTIVO

### LA DIGITALIZZAZIONE DEL PROGETTO IN AMBIENTE BIM



RPBW Trento - Museo della Scienza  
Schema energetico

## Villard Project Progetto Villard (6CFU)

Torna all'indice ☰

👤 Prof. Arch. Enrico Molteni

### PRESENTATION, OBJECTIVES AND CONTENTS

The “Villard Project” is a one-year architectural design course open to students of the course for a Degree in Science of Architecture and for a Master’s Degree in Architecture regardless of the year they are enrolled in. The course involves the collaboration among students at different levels of educational instruction; students of the Master’s Degree Course are offered a teaching method capable of replicating that diversity of experiences which is typical of every design group present in the professional world.

Part of the value of the course is dictated by the “journey”, as a formative element of knowledge of other educational realities in Italy and abroad. The topics of the course are often linked to complex territorial issues addressed with the support and involvement of the public administrations which are responsible for controlling these critical issues. The project leads to the development of an overall design solution within which each student will define a specific area.



## History of Construction Science and Techniques Storia delle scienze e delle tecniche costruttive (6CFU)

Torna all'indice ☰

👤 Prof. Arch. Massimo Corradi

### PRESENTATION, OBJECTIVES AND CONTENTS

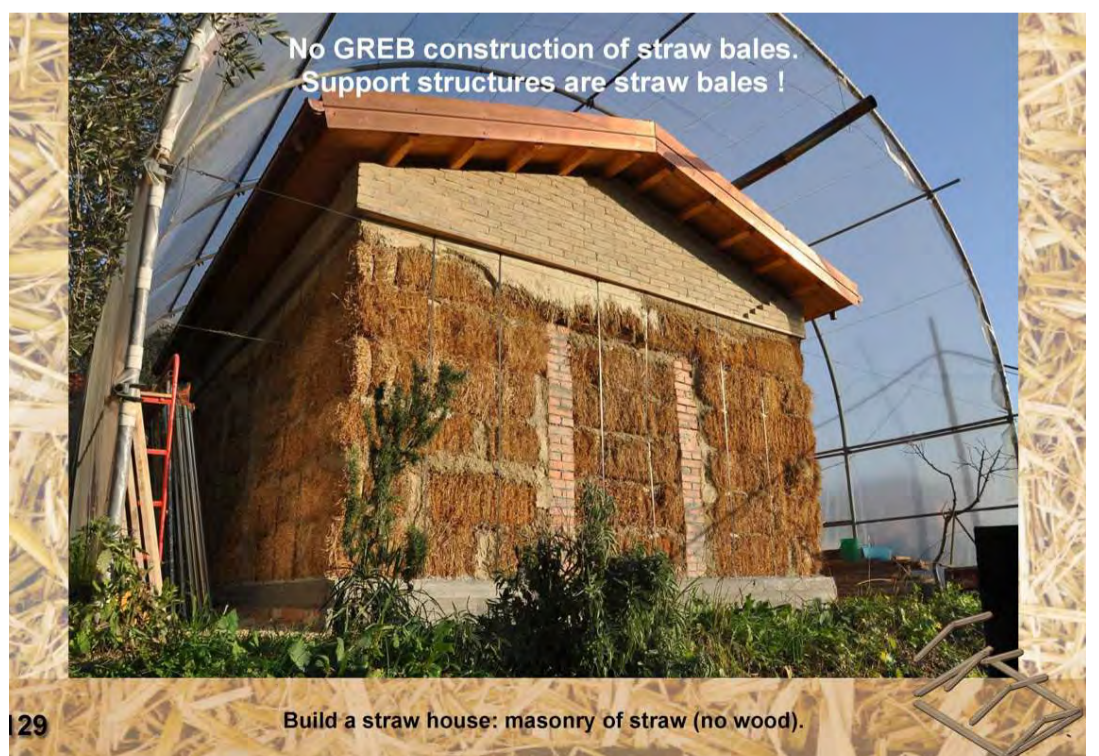
The history of science and construction techniques is a complex history because within it, different and distinct kinds of knowledge are intermingled: theoretical knowledge related to the physical-mathematical disciplines, technical-scientific knowledge born from empiricism, experience, practice and applied sciences, humanistic knowledge related to the development of letters, and then again, art and architecture, mechanics and construction, materials and structures, building technologies and much more.

The aim of the course is to respond, as far as possible, to the desire to control the design ideas of the past and present through the construction of models of architecture, structures, machines and, at the same time, to seek answers to the new questions that the history of construction and design in a broad sense have placed and pose to scholars and researchers on a daily basis.

As part of the educational activities, features of the history of construction from antiquity to the present day are dealt with, such as:

- 1) The history of construction from its origins to the Middle Ages
- 2) Mechanical sciences in ancient times
- 3) Builders of cathedrals
- 4) The Renaissance and the birth of a new science
- 5) Scientific enlightenment and neo-classicism
- 6) Experimentation and construction
- 7) The theory of elasticity and structural mechanics
- 8) Architecture and new materials: cast iron, iron, steel and reinforced concrete.

At the end of the course, during the summer, an intensive practical-constructive workshop is offered.



## Urban design (6CFU)

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 Prof. Arch. Manuel Gausa Navarro

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The course is designed as a continuation of the urban design process for students of the Degree Course in Design, but is also offered as an optional course for those in the Master Degree in Architecture. The expression and communication of a new type of approach to the challenges of the contemporary city and the design of new convivial/relational scenarios (inter and pro-active public and collective spaces) are the basis of the experimental and design path carried out during the teaching activity.

The course offers a theoretical/practical approach to the spatial and socio-cultural condition of the city, landscape and public space, understood as active multi-scalar scenarios (urban and territorial).

This approach takes into account the evolution over time, its relationship with new technologies and the development of innovative strategies for a new logic of complexity. The importance of public space as an active space and as an inter-connective, relational, and social, productive and interactive space (Pro(d)active Space) and its relationship with the new urban condition (Smart city-Intelligent City) and its communicative and co-participated expression (Empathic-City, Convivial-City) is another of the key themes of the course.

The course is part of a European program, "Creative Food Cycles (CFC)", co-financed by the Creative Europe Programme of the European Union with the aim of developing a cultural and holistic approach, combining all of the aspects of the food cycle: from production to distribution (phase 1), from distribution to consumption (phase 2) and from consumption to disposal (phase 3). Specifically, during the activities of the course, the third phase, the process of consumption and disposal of food waste, is studied in depth in order to find new innovative forms of food recycling (new materials, new products or new processes).

