



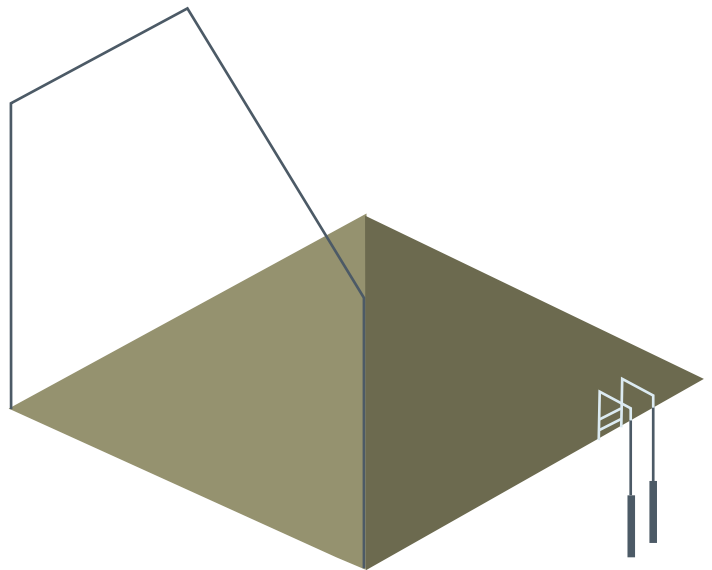
Enhancing of Heritage Awareness and  
Sustainability of Built Environment in  
Architectural and Urban Design Higher Education

# BOOK



# OF COURSES

IMAGINING PROGRAM for Sustainability of the Built Environment  
and Heritage Awareness



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**Note:**

*The courses were prepared by individual author/group of authors in relation to their professional expertise and backgrounds and in relation to values, themes and framework defined on the consortium level.*

# INTRODUCTION

HERSUS IO5 - Book of courses is the fifth HERSUS intellectual output, designed and developed in a form of Course/curriculum. The curriculum structure is considered a fundamental tool to maximize the contribution of the Schools of Architecture, and therefore the main output of the project. The development of the "Book of courses" is in direct relation to the need for the introduction of innovative curriculums within the thematic framework of sustainability and heritage, among the partner organizations, and also other organizations in participating countries in Europe. The development of the IO5 is essential for the HEI system in European countries, for its alignment with European standards, and for creating opportunities for long-term partnerships between HEIs in the field of architectural and urban studies. The need for this output is also directly related to the objective to improve the practical arena of urban and architectural design, all to increase the employability of future generations who should be educated under new programs.

## 1. IO5 AIMS AND PURPOSE

The aim is to collect all experiences from the previous phases of the project in order to create sustainable academic courses, which would educate new generations of professionals. IO5 should enhance the quality and relevance of professional development in Schools of Architecture and therefore assure effective excellence in terms of education of a new generation of professionals, strengthening the knowledge and assure requirements between education, research, and labour market.

More specific objectives for this IO5 are:

- (1) To develop and implement new courses and extracurricular activities in sustainability and heritage at the MSc levels according to Bologna requirements and the new developments in architectural education at HEIs involved in the project by the end of the project,
- (2) To increase capacity building for study in sustainability and heritage issues offered

both in English and in local languages at the MSc level,

- (3) To increase employability by targeting labour market needs in designing a sustainable environment, enabling newcomers/starters professional development in the field of sustainability of heritage, and building their motivation to study.

It is expected that IO5 would have an overall impact on different target groups within the academic environment, including students, professors, researchers, and other associated institutions.

- With the development of a new program, students would (1) acquire skills in understanding the importance of heritage as a pillar of sustainable urban development, (2) acquire knowledge on tools for implementing the heritage and sustainability approach at a professional level, (3) develop interest and commitment with heritage since the beginning of their education, and most importantly (4) gain greater employment opportunity after the education.
- Through work on the HERSUS program professors and researchers would (1) encourage cooperation between European countries, (2) update their learning and teaching methodology and tools and, (3) deepen applied research with the heritage and sustainability approach.
- Other associated institutions which will contribute to the development of IO5 would (1) seek synergies between European research groups for participation in future research calls, (2) promote the active participation of the Institutions working on heritage, (3) create the proper channels so that the Institutions expertise can be transferred to university education, and (4) make the potential professional and research activity for architects more visible for students.
- Proposed new courses should contain thematic reforms of existing courses across partner institutions. They should propose an active use of shared tools created during the project.

- For all the participating countries, the main goal is to increase employability after graduation, in terms of the ability to find fulfill and keep work. In the long term, it is expected to create new courses that will enhance the ability to purposefully use all the different competences in order to fulfil given professional tasks and/or to reach own professional targets and to adapt these competences to new environments and requirements.

## 2. IO5 METHODOLOGICAL OUTLINE

### 2.1. BASIS FOR IO5 DEVELOPMENT

The "Book of Courses" provides a synthesis of content, pedagogical methods, guidelines, and future structure of curriculum for teaching within the partner organizations in the relevant fields. It is founded on results from IO1, IO2, and IO3 and based on gathered experiences from LTT1, LTT2, and LTT3.

**IO1 "Review of the Best Practices on Educating Sustainability and Heritage"**, provides the structured review of the best practice of a) "Built Architectural and Urban projects" in different national contexts (Serbia, Italy, Cyprus, Greece, Spain), as well as of b) "Pedagogical and Educational

Models" conceptualised and applied in different academic institutions from HERSUS consortium (UBFA, IUAV, UCY, AUTH, USE). This review enabled comparison between contexts and identification of the specificities of each country in relation to how heritage and sustainability are approached in practice and in education. This provided the direction for IO5 toward what students should learn and be capable to provide in order to better link heritage and sustainability.

**IO2 "Questionnaire for the State of Art"** aimed at creating an argumentative and critically analysed state of learning of sustainability and heritage in the field of the urban and architectural design of higher education. It is the product of a Survey, which consisted of a two-pronged approach focusing on two target groups, experts and students in the HERSUS respective countries. This intellectual output provided IO5 with the identification of gaps in teaching and learning as well as of differences between HERSUS partners and countries in relation to legislative framework and understanding of sustainability, heritage, and their relations. It also helped in defining the theoretical framework in FUNDAMENTALS courses in IO5.



Figure 1. Inputs and basis for the IO5 – Book of courses

**IO3 “Statements for Teaching through Design for Sustainability of the Built Environment and Heritage Awareness”**- elaborate proposals regarding the contents and the methods of teaching architectural education. Structured around five thematic areas (Notions, Heritage types, Design approaches, Design actions, and Tools), it functions as a conceptual and methodological basis for the concept and content of courses developed in IO5. It also provides IO5 courses with a valuable source of information about understanding, scope, scale, teaching and learning approaches, and relevant literature on HERSUS-related concepts presented in IO3. This specifically provides a framework for designing content scope for DESIGN STUDIO courses and SPECIALISATION (elective) courses.

**LTT - Students workshops - LTT1 (Sustainable Reconstruction in Urban Areas), LTT2 (Adaptive Reuse), and LTT3 (Resilience and Climate Change)** – were used for testing the content and teaching and learning approaches conceptualised within the HERSUS project. In relation to content, the workshops helped examine the borderline cases and themes, and as such clarify the scope and scale for understanding heritage and sustainability relations. Besides that, they helped explore different methodological approaches to teaching and learning HER-SUS relations in relation to 3 initial thematic frameworks: reconstruction, reuse, and resilience. In that way, they helped broaden the understanding of heritage and sustainability relations and contributed to developing thematic and methodological frameworks for DESIGN STUDIO IO5 courses. In addition, these workshops were used for an experimental blended intensive educational approach. Through this approach, it was possible to explore how virtual and material educational contexts can be linked, combined, and amplified in order to include an innovative blended approach into the MA study program.

**“The Protocol for Conducting IO5”** (18/01/2022) was designed as a document that defined the general approach and steps in IO5 development. It defined the initial: Framework, Content, Timetable and development approach, Course design



Figure 2. The Protocol for Conducting IO5

elements, and Learning outcomes. Guided by this document, IO5 was supposed to be developed through several interrelated and conditioned phases based on the creative and critical dialogue of Expert Groups gathered around three RE HERSUS thematic frameworks that will be further explained.

## 2.2. THEMATIC FRAMEWORKS

With collected experiences from the previous phases of the HERSUS project (IO1, IO2, IO3) and in order to create sustainable, academic courses that would educate new generations of professionals, strengthen the knowledge, and assure requirements between education, research, and labour market the aim of IO5 is to propose new courses and to **thematically reform** existing courses across partner institutions.

Therefore, in order to structure the "Book of courses" that should contribute to bridge-building between sustainability and heritage, and enhance the position of these topics in architectural and urban design education,

the **concept of three thematic tracks** was introduced. The three tracks in question should overlap with the structure of the imaginary Study program in a way that each semester (from 1st to 3rd) is thematically lined up with a particular theme/track. In this way curriculum structure, the complexity of the courses and themes during semesters, and the range of subjects, questions, and scales could be properly addressed.

Each track (semester) has its specific framework and should propose an active use of shared tools created during the project. In the long term, it is expected to create new courses that will enhance the ability to purposefully use all the different competences to fulfill given professional tasks and/or to reach own professional targets and to adapt these competencies to new environments and requirements, concepts, knowledge, and skills in the field of sustainability and heritage.

INITIAL thematic frameworks/tracks, as stated in the Project application, were: REconstruction, Reuse, and RESilience.

- (1) **REconstruction** – urban heritage redevelopment used to address urban decay in cities,
- (2) **REuse** – the process of reusing an existing architectural heritage for a purpose other than which it was originally built or designed for,
- (3) **RESilience** – designing flexible structures that can learn from their environments, and creating transformable and sustainable space\*

The following elaboration has been regarded as starting point for work on IO5. The IO5 Protocol suggested RE Expert groups to start with the following structure and description of each thematic group (track) and to further elaborate and upgrade it during the preparatory phase of IO5 and future research within each RE Expert group.

**Discussions conducted during the work on IO5 resulted in a shift from the initial thematic frameworks.** Although all Expert groups supported the concept of a thematic approach to semesters, specific concepts were criticized either for being too narrow (reconstruction) or too comprehensive

(resilience). Besides that, it was difficult to organize the overall educational logic and to follow the proposed course structure, when some concepts are related to specific actions (reconstruction, reuse) and some to strategy (resilience). In addition, the initial attempt to relate semesters to specific time – horizon was also recognized as problematic in relation to proposed RE concepts.

In parallel, all Expert groups concluded that before discussing the specificity of each semester it was necessary to define the MA program as a meaningful whole, where it will be possible to discuss the relations to both heritage and sustainability throughout the MA course, based on the principle of rising complexity throughout semesters.

Taking this into account, the improved pedagogical approach was introduced which will be elaborated in more detail in MA STUDY PROGRAM CONCEPT. In general, instead of having strict divisions between semesters and key concepts – the nested approach was proposed, in which 1st semester provides fundamental knowledge on concepts and relations between HERITAGE AND SUSTAINABILITY, and understanding why heritage matters. The special focus of 2nd semester is on the relationship between the past and present, as well as how PEOPLE relate to heritage, while the focus of 3rd semester is on the ever-changing ENVIRONMENT in which the concept of heritage is approached from the perspective of process and change.

### 2.3. EXPERT GROUPS

Following the initial thematic frameworks and considering the specific educational, scientific, and practical fields for which HEIs participants have competencies, three "RE" Expert Groups have been created: (1) REconstruct, (2) REuse, and (3) Resilience – that worked together on developing specific content and courses for each semester.

Each participant expressed initial interest to join specific expert group and all partners agreed on participants for each "RE" Expert Group jointly, respecting the levels of researcher's experience and providing balanced representation of partners within all three groups.

RECONSTRUCT	UBFA	Ana Radivojević (C)
		Mladen Pešić
		Nevena Lukić
	IUAV	Emanuela Sorbo
	UCY	Maria Philokyprou
		Theodora Hadjipetrou
	AUTH	Alkmini Paka
		Maria Dousi
	USE	Marta García-Casasola
		Julia Rey-Pérez

REUSE	UBFA	Ana Nikezić (C)
		Milica Milojević
		Bojana Zeković
		Aleksandra Đorđević
		Aleksandra Milovanović
	IUAV	Sofia Tonello
		Mauro Marzo
		Viola Bertini
	UCY	Andreas L. Savvides
		Panayiota Pyla
		Maria Nodaraki
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		Mar Loren-Méndez
Daniel Pinzón-Ayala		

RESILIENCE	UBFA	Jelena Živković (C)
		Nataša Ćuković Ignjatović
		Jelena Ristić Trajković
		Ana Zorić
		Tamara Popović
	IUAV	Enrico Anguillari
	UCY	Odyseas Kontovourkis
		Stavroula Thravalou
		Aimilios Michael
	AUTH	Konstantinos Sakantamis
		Angeliki Chatzidimitriou
	USE	Enrique Larive-López,
		Jose Peral-López

Expert Groups were supposed to work both separately and together, each bringing experience, needs, and objectives, in order to successfully complete new innovative courses/groups of courses/extracurricular activities, equally taking into account each of the fields of education. It is their responsibility to include all the conclusions reached, as well as a set of recommendations and guidelines derived from Transnational Meetings M1-M4, Multiplier events E1 and E2, Learning/Teaching/Training activities C1-C4 and from Outputs O1-O4. Seniors, intermediates, and juniors were all continuously engaged in the development of the O5.

Coordinators of the Expert Groups were established in order to help in the delivery and harmonization of steps in developing IO5. Each Expert Group was coordinated by one senior researcher from UB-FA (IO5 lead organization).

#### 2.4. CONTENT AND PHASES/STAGES IN IO5 DEVELOPMENT

IO5 Protocol outlined the development of IO5 in several interrelated and conditioned phases and steps based on the creative and critical dialogue of Expert Groups gathered around three RE HERSUS scopes. The initial IO5 development outline was further upgraded and re-arranged in accordance with the conclusions of TPM 3 and TPM 4.

The Template for Courses design has been initially provided in IO5 Protocol, but further improved and adjusted to the educational concept developed during the process of working on IO5. All IO5 phases were realised through online communication between partners (meetings, questionnaires, e-mails), while final conclusions for the I and II phases were made on TPM 3 and TPM 4 meetings in Nicosia (Cyprus) and Thessaloniki (Greece)

The following are the phases and steps in developing IO5

#### **I phase – MA CONCEPT NOTE DEVELOPMENT**

The first phase in working on IO5 aimed at developing the overall concept of the imaginary MA, its basic structure, logic, and content. Expert groups first discussed the initial ideas and concepts for each semester

as defined in Project Application and in IO5 Protocol and identified key issues and challenges for further development of the concept note. Besides discussions at the meeting, written suggestions were also gathered in order to help define the concept note. TPM 3 in Nicosia, Cyprus was used for the final discussion on the critical issues as well as for the formation of the general concept of the Imaginary MA program for which the Book of courses is designed. At the meeting, the general structure, content, and logic of the MA program were agreed with a focus on 3 types of courses: fundamentals, design studio, and specializations (electives). It was also agreed not to proceed with RE group initial titles (reconstruction, re-use, resilience) that were found confusing, but to focus on specific pedagogical goals and content of each semester in order to help students develop their knowledge, attitude, and skills about heritage and sustainability relations throughout 2 years of study.

Steps in this phase included:

- **UBFA coordinators' initial meeting and working organization**

- **Expert Groups formation** – All HERSUS members choose appropriate Expert Group members in line with professional and academic background, as well as based on the general scope of Expert Groups.

- **Expert Groups Meeting 1**– The first kick-off session was organized (three parallel sessions of all groups): first impressions on group scope, selection of course types, and topic discussion.

- **Concept note drafting** – General MA concept and structure and initial Course types selection on Expert Group level - drafting first concept notes for courses

- **TPM 3 in Nicosia, Cyprus** - Presentation of first concept notes for courses within; feedback for further development.

## II phase – MA COURSES DEVELOPMENT

The second phase in working on IO5 built upon the conclusions of TPM 3 as well as on written suggestions by all experts and focuses on drafting the final MA general concept as well as on conceptualizing the content and structure of 3 main types of courses: Fundamentals, Design Studio, and Specialization (Elective) courses. Expert Groups Coordinators worked on the synthesis

of previous steps and provided Expert groups with an initial draft for Fundamentals courses to be used as a starting point for discussion. After accepting the overall MA concept and initial drafts of Fundamentals courses, the final draft of the Template for Courses was made that served as a basis for developing Design Studio and Specialization (Elective) course drafts by all Partner institutions. In this phase, 3 Expert Groups meetings were organized and used for brainstorming and discussion on each type of course. The conclusions of these meetings, as well as drafts of Course designs, were further discussed at TPM 4 in Thessaloniki, Greece. This meeting was used for final discussions on course development, but also for identifying new creative potentials that workshops as learning /teaching formats offer. Therefore, in addition to previous course types, workshop as a new course type was added. Besides that, the meeting was used to define the concept of a Master thesis/project format that should be flexible enough in order to be implemented in a specific national and institutional context.

Steps in this phase included:

- **UBFA coordinators' working organization for Course Design rendering** – Further development of courses based on TPM 3 feedback and conclusions.

- **Expert Groups Collaborative workshop (Meeting 2)**– Fundamentals

- **Expert Groups Collaborative workshop (Meeting 3)** – Design Studio

- **Expert Groups Collaborative workshop (Meeting 4)** – Specialization (Elective) courses

- **Course Design drafting** – Fundamentals, Design Studio, and Specialization (Elective) courses draft versions + internal Expert-groups feedback

- **TPM 4 in Thessaloniki, Greece** - Final discussions on courses development within; feedback for finalization.

## III phase – COURSES FINALIZATION

The third phase comprises of MA courses finalization and includes all types of courses design: a) Fundamentals Courses – The RE Group team coordinators developed the drafts for Fundamentals (3 courses – 1 per semester); b) Each partner provided at least 2 proposals for Design Studio Courses; c)

Specialization (Elective) Courses – Each partner provided at least 4 proposals for Specialization Courses. The focus of Specialization Courses was on Methods and Tools; d) Workshop (Experimental) Courses – In line with the application scope, the Syllabuses of three realized HERSUS Workshops from Venice, Nicosia, and Thessaloniki were adapted in a form of curriculum following the same Template. Master thesis & project outline were developed by each partner institution based on Master Thesis Comparative Table.

Steps in this phase included:

- **Course Design finalizatio** : Expert-groups feedback, Finalization of Fundamentals, Design Studio, Specialization/Elective and Workshop courses + Master thesis & project outline.
- **Harmonization of MA concept and courses design**

**IV phase – LAYOUT PUBLICATION DEVELOPMENT**

The fourth phase includes a collection of all components of the IO5 Book of courses, writing Introduction, methodology, and MA Concept sections as well as elements that bind the IO5 publication together and relate it to other HERSUS IOs. It also includes the design and presentation of IO5 results and demonstrations.

- **Drafting Book of Courses**
- **Layout and Book of Courses publication development.**

**2.5. IO5 COLLABORATION METHODOLOGY – WORKING CYCLES**

The need for collaborative work of Experts Groups faced several challenges that further shaped the methodological approach performed throughout the IO5 development process. The key challenges were:

1. How to work on the development of the Book of Courses while at the same time keeping in mind the COURSE as a whole and working on specific RE content for a specific semester
2. How to Coordinate RE tasks and keep continuous and harmonized INPUTS AND OUTPUTS of each task

In order to adequately answer these challenges and at the same time enable active participation and collaboration of all RE experts, the Expert groups coordinators organized work for each specific meeting through WORKING CYCLES

Steps in each WORKING CYCLE included:

a) PREPARATION PHASE - This phase was conducted by RE coordinators through their internal meetings and included:

- CMeeting 1 – First coordinators’ meeting in the working cycle was used for summarizing previous outputs and defining the tasks for the next RE Meeting
- Analytical phase - Coordinators prepared the agreed material
- CMeeting 2 – Coordinators worked on the Synthesis of the material and formation of

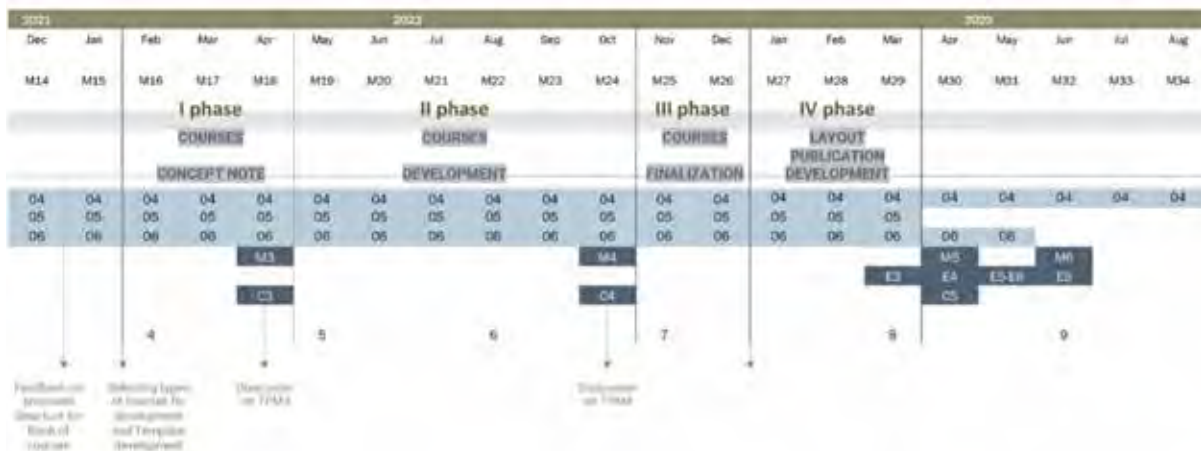


Figure 2. IO5 Timeline in line with the overall project design

Presentations for each RE group

- Distribution of the notes/tasks for the meeting. Prepared Material was distributed to all experts before the meeting, in order to inform them of expected issues to be discussed. All experts were supposed to fulfill certain tasks and prepare for the discussion at the meeting.

b) EXPERT GROUPS MEETINGS – This phase included all participants from Expert groups. Three individual online meeting sessions were simultaneously organized, lasting from 2 – 3 hours. These sessions were generally organized into two parts: presentation and brainstorming & discussion. Meetings were recorded.

c) POST-EXPERT GROUPS MEETING - This phase was conducted by RE coordinators through their internal meetings and included

- CMeeting 3 - Discussion on EXPERT GROUPS MEETINGS
- Distribution of Materials and tasks to Expert groups and HERSUS leaders

This working-cycle approach was used for all 4 Expert Groups meetings. The Output from each working cycle was INPUT for the next.

- preparation phase
- expert group meetings
- - - post-expert groups meeting

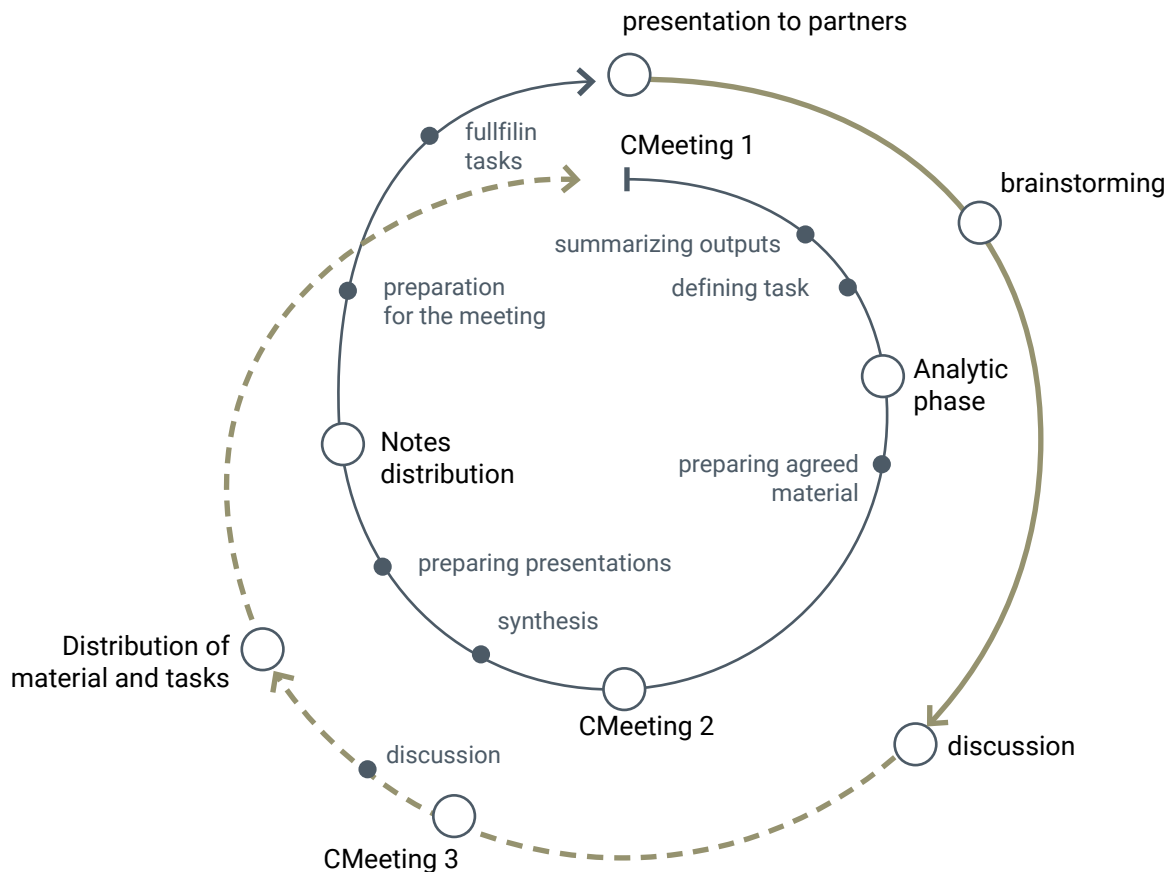


Figure 3. IO5 working cycle

## 2.6. OVERVIEW OF RE\_MEETINGS

Table 1. IO5 overview of all four meetings and collaborative workshop

M1	RE: EXPERT GROUPS MEETING I	<b>1 - Expert Groups Introduction</b> - Short presentation and introduction of each member of the RE group
		<b>2 - Developing of Concept Note for each RE group</b> - Expert Groups description and tasks according to the project application - IO3 and IO5 reflections - Short statements and ideas for future development within RE groups (discussion)
		<b>3 - Summary</b> - Plan for upcoming period and activities - Plan for future period and meeting schedule - Development of concept notes within each group
M2	RE: EXPERT GROUPS MEETING II  TOPIC: FUNDAMENTALS	<b>1- Introduction</b> - Updating on the new members of experts groups - Findings and concluding remarks from the Nicosia discussion – structure and topics - PRESENTING THE CONCEPT OF TEACHING AND LEARNING HERITAGE AND SUSTAINABILITY
		<b>2- Discussion on the CONTENT of FUNDAMENTALS: theory + tools (skills)</b> - Short statements and ideas for the development of FUNDAMENTS within RE groups - Discussion on the structure, contents, learning outcomes, and assignments for the FUNDAMENTS track - Relation to IO3 – thoughts and reflection
		<b>3 - Summary</b> - Concluding remarks - Development of concept notes within each group - Plan for the upcoming period and activities, and future meeting schedule
M3	RE: EXPERT GROUPS MEETING III  TOPIC: DESIGN STUDIO	<b>1- Introduction</b> - PRESENTING draft CURRICULUM for the module FUNDAMENTALS - CHANGING the date for the OCTOBER meeting (from the 6th to the 13th or 14th of October) - For each partner to connect existing CURRICULA with HERSIUS scope
		<b>2- Discussion on the CONTENT of DESIGN STUDIO</b> - Short statements and ideas for the development of DESIGN STUDIO within RE groups - Discussion on the structure, contents, learning outcomes, and assignments for the DESIGN STUDIO track - Relation to IO3 – thoughts and reflections
		<b>3 - Summary</b> - Concluding remarks - Development of concept notes within each group - CURRICULUM TEMPLATE to be delivered with Meeting recording - Preparation for the NEXT meeting (TWO design studio curriculum drafts per partner and OPTIONAL for fundamentals) - Plan for the upcoming period and activities, and future meeting schedule

**RE: EXPERT  
GROUPS  
MEETING I  
TOPIC:  
ELECTIVES**

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**1- Introduction**

- Wrap up meeting I, II, and III – outcomes and expected results
- Next steps concerning IO5 – preparation for the book of courses

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**2- Discussion on the CONTENT of ELECTIVE COURSE**

- Short statements and ideas for the development on ELECTIVE COURSE within RE groups
- Discussion on the structure, contents, learning outcomes and assignments for the ELECTIVE COURSE track
- Relation to FUNDAMENTALS AND DESIGN STUDIO – thoughts and reflection

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**3 - Discussion on the proposed DESIGN STUDIO curriculum**

- Discussion on the structure, scope and content of the proposed DESIGN STUDIO curriculums
- Discussion on the overall concept for the DESIGN STUDIO – if possible inside RE groups

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**4- Conclusion**

- Preparation for the NEXT meeting
  - (elective course curriculum drafts OPTIONAL for all researchers and minimum 4 per partner)
  - Plan for the upcoming period and activities, and future meeting schedule
-

# STUDY PROGRAM CONCEPT

## 1. IMAGINARY STUDY PROGRAM

MA STUDY PROGRAM on sustainability and heritage represents a plausible, but flexible and adaptive program that gathers the versatility of 5 different Universities. It overlaps different disciplinary scopes, a multiscale approach that interlocks a variety of expertise, 5 different legislation frameworks, and a possibility to provide a multicultural and multisensorial experience for students and all other parties involved in the process, named MA IMAGINARY STUDY CONCEPT.

The proposed study program seeks to reach three goals 1) understanding the complexity of the environment we live in, 2) developing a critical and reflexive knowledge base capable of intertwining research and design, as well as to integrate historical, social, and ecological perspectives, and 3) profiling a responsible designer who approaches design in a multiscale and multidisciplinary manner.

This approach offers a lively and thought-provoking program to important concepts about sustainability and heritage from the perspective of architectural and urban design. Particular emphasis is placed on the idea of 'reflective practice'; an approach that aims to encourage students to actively participate in learning how to respectfully and responsibly approach their environment. Theoretical and practical classes overlap, case studies and historical examples, theoretical ideas, and live community projects to support students understanding of how architecture and urbanism can be developed in the light of sustainable development. This two-year full-time MA program is aimed at students who are looking for a rich, advanced, and engaging post-graduate program that focuses on the multiple facets and relationships between sustainability and heritage. By pursuing this MA program, the students will get the necessary skills for becoming sophisticated design-research thinkers and practitioners.

This new MA in Sustainability and Heritage provides students with the skills and know-how to practice architecture at the cutting edge of the sustainability agenda. The program is designed to provide a theoretical basis in Sustainability and Heritage as an approach to understanding the built environment of the past, present, and future, while simultaneously applying different modes of teaching and learning environments.

It is primarily intended for graduates and professionals from a range of design backgrounds, including architecture, interior, and urban design, who wish to develop knowledge in architectural and urban design and gain the ability to apply it responsibly to the issues and prospects of past, present, and future heritage. Dealing with a diverse spectrum of wicked design problems the program provides an excellent environment for the application of different methods in architectural practice, from research to design, from urban to rural, from small scale to large scale, from community work to working in extreme contexts. The educational path meets adequately the increasing need to face the complexity of problems and the new professional responsibility of architects, as required both in Europe and worldwide. The study program is founded on three premises, being: 1) understanding the connection between sustainability and heritage through the wide understanding of the past, present, and future spectrum of built heritage, 2) positioning the contemporary responsible and critical attitude towards the environment we are living in and building for, and finally 3) approaching reflective considerations of future strategic components of building the environment.

## 2. MA STUDY PROGRAM: STRUCTURE AND CONTENT

MA study program Sustainability and Heritage is a 120ECTS program, lasting four semesters with a professional degree MArch. It represents the second cycle master's level program in the field of a chitecture work

and urbanism. It is envisioned as a natural continuation of Bachelor studies in the field of architecture, urbanism, and bordering disciplines, covering at least 180ECTS.

The program implies three semesters of a dynamic, heterogeneous, and elective learning environment, which includes compulsory and optional units backboneed with a design studio unit. The final semester is dedicated to the master's thesis project under the supervision of a mentor.

The role of the 1st semester is to provide fundamentals for further studies (semesters) and to establish a common ground for students coming from various programs. The complexity of how the issues of heritage/sustainability are approached learned and implemented in students' learning activities grows gradually through semesters. The role of the 2nd semester is to introduce the social and cultural dimension to the already establish knowledge of HER-SUS, and of the 3rd semester is to introduce the environmental aspect as the most complex one. While the 1st semester deals with the heritage of the past focusing on the preservation of identity and the 2nd on the

process of management of existing heritage, namely the transformation of present heritage identity, the 3rd semester looks at heritage as a sustainable framework for building future identity where designing is a strategic process that that is informed by the environment in the process of creating adaptable places.

**FIRST SEMESTER: linking heritage and sustainability**

The 1st semester provides fundamental knowledge and skills in all aspects of heritage/sustainability and their relation to architecture and urban design. The key issue for students is to focus on relations to the PAST and to understand WHY HERITAGE matters and how it is related to SUSTAINABILITY.

**SECOND SEMESTER: linking heritage, sustainability, and people**

The special focus in 2nd semester is on the relationship between the PAST and PRESENT, as well as how PEOPLE relate to heritage. CONTEXT, VALUES, AND USES of heritage are the key issues to be explored in order to help students learn how can built heritage be adjusted to the contemporary needs of PEOPLE AND SOCIETY.

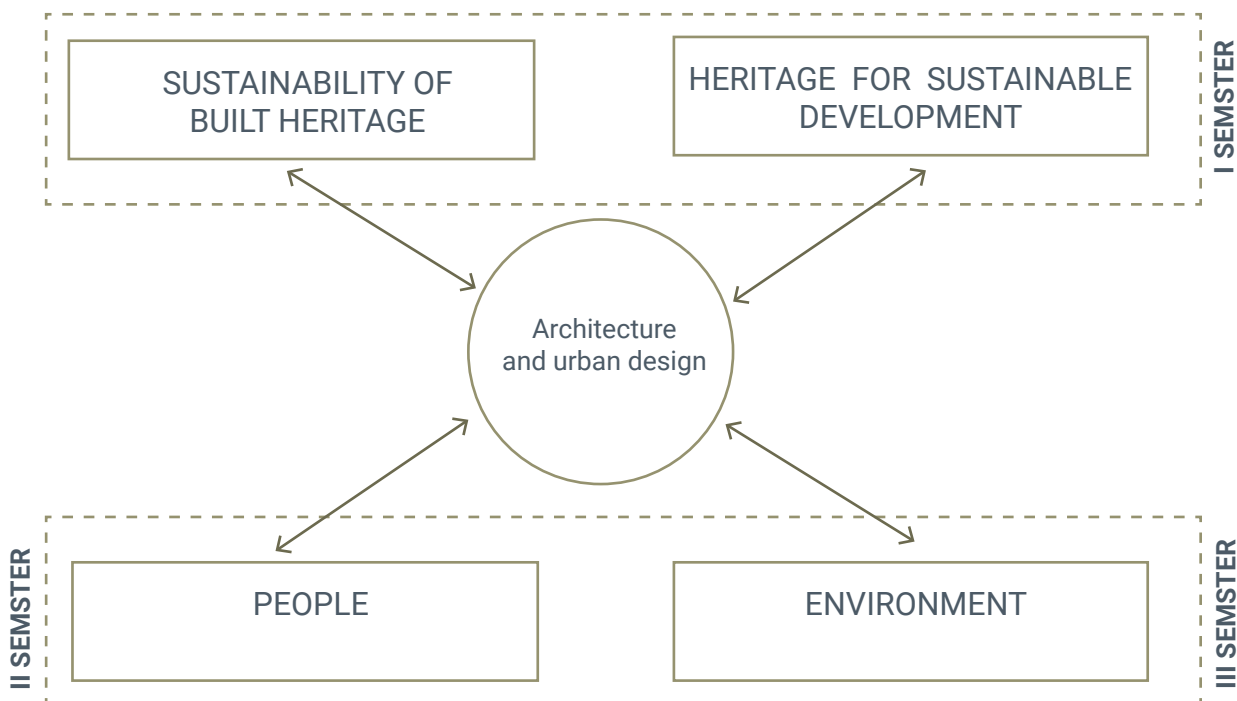


Figure 4. Structure and content of the MA Study program

**THIRD SEMESTER: linking heritage, sustainability, people and environment**

The role of the 3rd semester is to approach the concept of HERITAGE from the perspective of PROCESS and CHANGE and to establish links between the PAST, PRESENT, and FUTURE. The special focus is on the ever-changing ENVIRONMENT, as well as on the issues of uncertainty/risk/opportunities, and management of change through architecture and urban design.

**FOURTH SEMESTER : Master thesis project**

The role of the 4th semester is to show the understanding, and critically acclaimed individual perspective and perform a research-based design thesis in the field of architecture and urbanism with a focus on sustainability and heritage

The first three semesters are conducted through three units, namely: 1) FUNDAMENTALS - theoretical unit, compulsory in its nature imagined as a framework and a foundation of the whole program; 2) DESIGN STUDIO - practical unit, elective in its nature imagined as a research-design core of the program; and 3) SPECIALISATION – an applied unit that covers all kinds of tools and assessments, as well as other technical, artistic, social, etc. methodological skills elective in nature intended to support design studio unit. The fourth semester is seen as a united research and design ground modeled individually. The fourth semester is seen as a unity of research and design, grounded and modeled individually by students in the form of their final work, or a MASTER THESIS, summarising and synthesizing the previously gained knowledge.

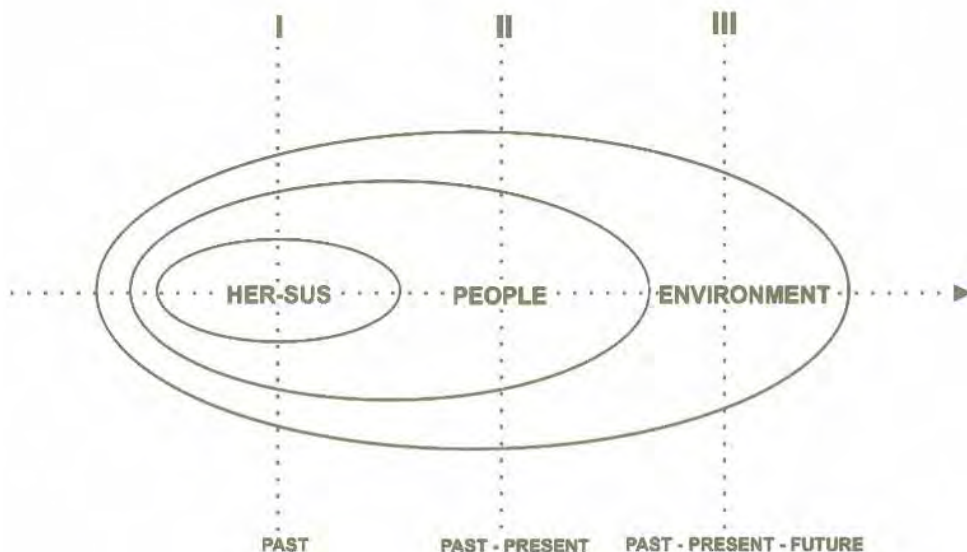


Figure 5. Successive changing and layering of topics

The structure of credits is intended to support the legislative framework of all partner countries. Therefore, it assumes a theoretical line covering 30% or 9ECTS, a practical design part covering 50% or 15ECTS, and an applied skills part covering 20% or 6ECTS. Also, electivity is fulfilled through the design studio and specialization unit. The program is highly innovative for two reasons. Firstly it could be conducted partially in blended intensive mode (fundamentals and specialization and partially design studio) to accommodate the presence of experts from all partner countries in all semesters and to allow for flexible intense mobility that implies short mobility programs. This teaching methodology was already tried out through workshops. Secondly, the flexibility and adaptability of the program are high as specialization covers a pool of courses that are available in all semesters and could pop up as needed depending on the present state of the arts or emerging problem or context. Learning styles and methods combine different tools. Therefore, courses will be delivered through lectures, seminars, on-site and site-specific analysis, and workshops, using, different approaches (exploratory, prescriptive, normative, comparative, and creative). Courses will be accessed through group discussions, small assignments, and individual written and analytical assignments.

## 2.1. FUNDAMENTALS

Since the first decades of the 21st century, theories and practices of heritage relate increasingly to ideas of environmental, social, and economic sustainability. How do changing ideas of heritage and an ever-expanding abundance of heritage places challenge sustainability? How does this shift expand objectives based on safeguarding inherited places and their cultural/natural values?

Theoretical UNIT named FUNDAMENTALS evolves through three semesters. It is an integrated compulsory Unit of 9 ECTS that is two-folded and consists of a theoretical part, conducted through lectures, that carries 6 ECTS, and the second part of 3 ECTS, intended to acquire practical skills accommodating the first theoretical part.

The focus is on critical discussion, mutual support, and feedback, with students having the opportunity to direct their own learning by their engagement with suggested materials and exchange with others through shared insights, experiences, and stories outside the classroom, to encourage awareness and reflection inspired by experiences of places.

The First semester focuses on understanding the relationship between heritage and sustainability and its management. The

Table 3. IO5 curricula structure

Imaginary Study Programme – Master Level			
1st semester PAST	2nd semester PRESENT	3rd semester FUTURE	4th semester SYNTHESIS
<b>FUNDAMENTALS</b> 1 course x 9 ECTS Obligatory Sustainability and Heritage-1	1 course x 9 ECTS Obligatory Sustainability and Heritage-2	1 course x 9 ECTS Obligatory Sustainability and Heritage-3	Master Thesis Master Design Project + APPLIED FUNDAMENTALS DEMONSTRATIONS (previously implemented course) 30 ECTS
<b>DESIGN STUDIO</b> 1 studio unit x 15 ECTS (e.g. studio, studio+seminar, studio+ workshop) elective	1 studio unit x 15 ECTS (e.g. studio, studio+seminar, studio+ workshop) elective	1 studio unit x 15 ECTS (e.g. studio, studio+seminar, studio+ workshop) elective	
<b>SPECIALIZATIONS</b> Specialist skills x 3 ECTS (or 6 ECTS) elective			
Expert Group 1 RECONSTRUCT	Expert Group 2 REUSE	Expert Group 3 RESILIENCE	

course provides fundamental theoretical and methodological knowledge that raises heritage awareness and explains different relevant aspects of heritage and sustainability relative to architecture and urban design, establishing a common ground for students having backgrounds in various programs.

The focus of the course is on understanding the past of the built heritage in the light of the processes and ways of their creation, the lived phases of the life cycle, as well as the existing - present state that would enable students to recognize relevant values and attributes, understand their meaning and importance, and establish a relation to the notion, principles, and elements of sustainability.

Key theoretical issues and challenges that will be taught during the course refer to the notion of heritage, History and Theory of Restoration, Conservation Status Evaluation, and Conservation Science, seen in the frame of environmental protection and sustainability, and following the key framework in the sense of Heritage Charters, Declarations and Principles, other legislation related with protection of built and natural environment, as well as key issues of environmental design including Sustainable Development Goals (SDG).

Key practical issues cover a better understanding of the investigating heritage problems and the way they should be analysed and described, through the introduction of basic elements of academic reading and writing, as well as tools that will enable them to understand, document, and evaluate built heritage. Gained skills will enable students to perform on the built heritage a relevant on-site analysis and to document and evaluate it properly.

The Second semester focuses on understanding the present contested heritage and its relation to people. This course provides theoretical and methodological knowledge that deals with heritage in its direct relation to the present. It focuses on raising awareness of everyday, more modest, non-exceptional, and contested heritage, which is less appreciated and in more danger of disappearance, but through which people address the past. By dealing with

a such heritage that is close to people and community, students will have the opportunity to integrate the social component to the link between heritage and sustainability.

The focus of the course is on understanding the built heritage as a part of the everyday life of the local community, in light of contemporary urban processes and crises, as well as the pros and cons of its management process. It will enable students to recognize relevant values and potentials in understanding the meaning and importance of such heritage, establishing a common ground and a critical position for its possible reuse.

Key Theoretical issues and challenges that will be taught during the course refer to the notion of cultural diversity and heritage genealogy focusing on Cultural and Collective Memory, Urban Patterns and Narratives, as well as a cultural identity. This course will examine the significance, opportunities, and dilemmas inherent in this shift, building on transdisciplinary creative discourse intertwining historic urban landscapes, values-based conservation, dissonant heritage, and critical heritage studies. The synergies and gaps between heritage and sustainability as social processes in a wide range of disciplines, including cultural ecology, environmental history, sustainable design, and urban studies, will be discussed, following key frameworks in line with UNESCO and SDGs, European Renovation Wave, Green Deal, New European Bauhaus, as well as other regional and local frameworks.

Key practical issues cover a variety of core principles of on-site analysis, as to incorporate the sensorial, affective, and emotional aspects of the knowledge, and integrate it properly with the rational knowledge (field walk, mental maps, collaborative mapping, space syntax, contextual reading, collective memory interpretation, transect walk, sketches, drawing, collages). The course develops personal and critical perspectives within this process of understanding and recognizes the socially sustainable dimension of heritage.

Gained skills will enable students to perform methodological and practical steps on the

built heritage understanding the relationship between heritage, sustainability, and people, and the reason why social engagement through participation, design for all, and creation of the attractive, open, and accessible environment, represent a sustainable act and understanding of vulnerability and risks related to the built heritage.

The third semester opens the question of future strategies in relating heritage, people, and the environment with sustainability in its wide sense.

The course provides students with theoretical and methodological knowledge that would enable them to understand and deal with heritage as a part of the ever-changing natural and social environment. It builds upon knowledge gained in previous semesters in order to help students develop a more dynamic understanding of heritage as a concept that links past, present, and future. In that context, the role of heritage in sustainable development is discussed by focusing on its possible use as a (re) source of continuity or change, and problematized in relation to a variety of risks and challenges as well as needs and values for future societies.

The focus of the course is on relating the built heritage to social and ecological systems and processes in order to help students understand the complex and dynamic nature of heritage and recognize key threats and opportunities, as well as potential uses of heritage as a basis for sustainable development.

The course builds upon the ecological approach to the socio-spatial environment (understood as palimpsest), as a general theoretical framework for understanding the dynamics, vulnerability, and potentials of heritage in relation to process and change. It will provide students with basic knowledge of resilience and socio-ecological systems theories, as well as of environmental/ecological/integral/sustainable/green/participatory design theories. In that context, special attention will be paid to linking heritage to the concepts related to change (resilience, risk, uncertainty, vulnerability), but also to different strategies to address inevitable changes (flexibility, adaptability, multi-functionality, nature-based

solutions...). Besides that, this semester will provide students with additional focus on the economic dimension of sustainability by introducing the concepts of circularity, efficiency, and urban metabolism.

The course should help students analyse heritage and built environment in relation to the variety of developmental challenges, in order to envision and assess their meaning, purpose, and appearance in relation to both contemporary and future needs of society, and apply them in Design studio, through the critical and eco-systemic approach.

In order to be able to understand and analyse the overall problem, the students will learn about research and design methods and techniques for managing change, and specific tools for mapping and analysis, developing scenarios and environmental strategies, assessment/evaluation of impacts, and anticipating the effects of spatial interventions. Knowledge about the potential and logic of the use of specific methods and tools will help students to adequately apply them in the design studio and give them a clear vision of how can theoretical knowledge be used in practice. Linking theoretical and methodological knowledge with student-centered teaching and learning activities will also help students develop critical and systems thinking skills.

## 2.2. DESIGN STUDIO

Design studio UNIT follows the thematic scope of the theoretical unit through all three semesters. It is an integrated elective Unit of 15ECTS that can be conducted in different ways depending on the proposed teaching methodology. It consists of a Design studio course as a major part covering 9 to 12 ECTS, accompanied by Seminars, Workshops, Masterclasses, Laboratory work, and alike, covering 3+3 or 6 ECTS. Design studio course can be also split into two – an introductory research design studio course and a design studio, each covering at least 3ECTS. This variety is introduced to cover the multiscale, multidisciplinary, and flexible approach of each partner country and to enable adaptability towards the different nature of the problem explored.

Based on the theoretical framework explored through FUNDAMENTALS key design approaches in a Design studio course refer to Environmentally sensitive design, Ecological design, Integral design, green/bioclimate/biophilic design, landscape and nature-based design, infrastructure design, information-based design, reprogramming and reuse design strategies, soft design strategies, design for human health and well being with special attention to accessibility, participation, ethics, and co-design.

The course will be accessed through group discussions, small assignments, and individual research and design assignments. The focus is on critical design thinking and acquiring an individual approach as an opportunity to direct one own learning by their engagement with suggested materials and exchanging with others through shared insights, experiences and stories outside the classroom, to encourage awareness and reflection inspired by experiences of places.

**The 1st semester** provides practical knowledge and skills in relating heritage

and sustainability through typomorphological analysis, documentation analysis, characterization, documentation, and valorization of analysed heritage, systematization, and synthesis on the level of small-scale architecture and urban design projects. The key issue for students is to focus on HERITAGE VALUES in relation to SUSTAINABILITY through providing relevant design techniques that investigate and define the physical potentials of the heritage

**The special focus of the 2nd semester** is to provide practical knowledge and skills in relating heritage and sustainability with community, i.e., dealing with wicked problems of contemporary city and society. The focus is on trans-disciplinarity and multi-scalarity and on how PEOPLE relate to heritage. CONTEXT, VALUES, AND USES of heritage are the key issues to be researched in order to help students learn how can built heritage be adjusted to the contemporary needs of PEOPLE AND SOCIETY. The 2nd semester deals with relevant RE and SOFT design techniques.

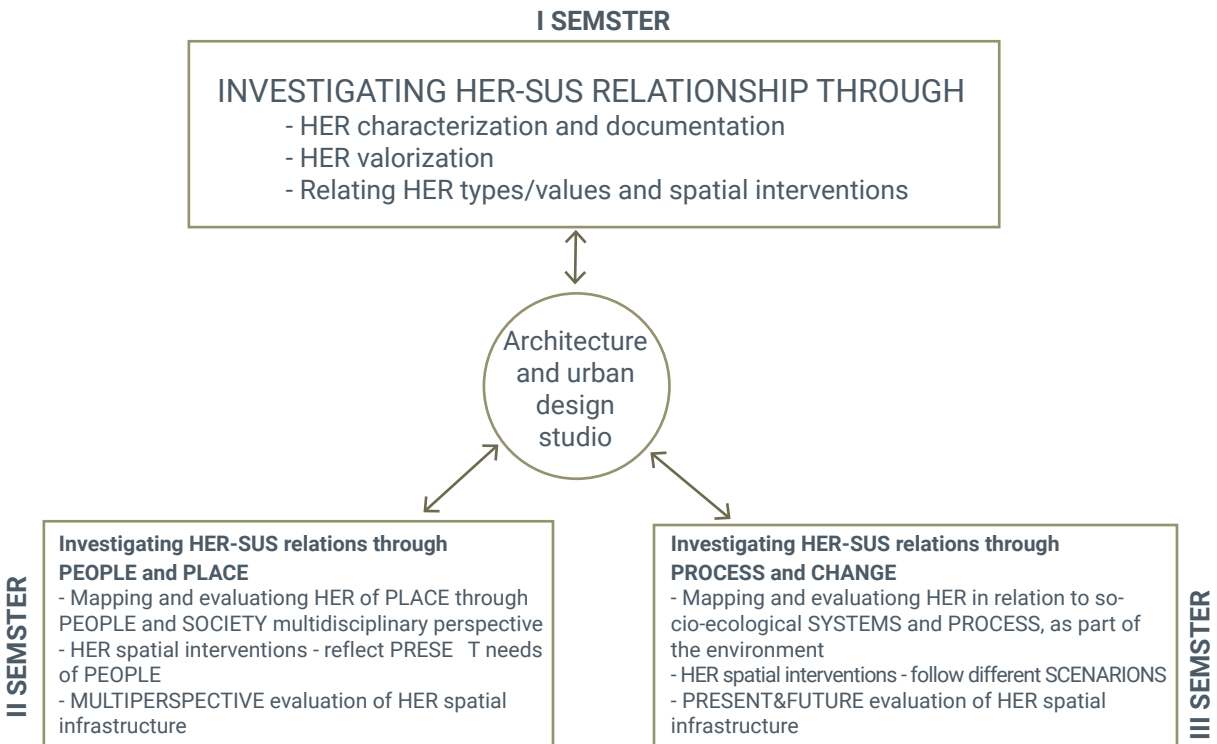


Figure 6. DESIGN studio frameworks

**The role of the 3rd semester** is to approach the concept of HERITAGE from the perspective of PROCESS and CHANGE and provide students with practical and critical knowledge through system-based research. The special focus is on the ever-changing ENVIRONMENT, as well as on the issues of uncertainty/risk/opportunities, and management of change through architecture and urban design. The 3rd semester deals with relevant different system-design techniques.

The main contemporary feature of the DESIGN STUDIO track is its folded quality. From the overall educational perspective, the consortium realised that studio methodology is mainly individual and depends on the leading teacher. On the other hand, from the students' perspective, it is not clear what is the difference between the outcomes of the first, second, and third semester design studio. Therefore, it was decided to point out specific features for each semester as general outcomes for each semester. Apart from content characteristics in line with

FUNDAMENTALS, it was realised that the student first has to learn to understand, read, valorise and therefore notice the specific character of the place and interpret the actual urban and architectural context through a small design intervention. Then, during the second semester based on the gained experiences, the student differentiates between past and present conditions and circumstances of the heritage, involving cultural and social dimensions of the place, valorising and noticing contested features of the place. In this process, the student is setting a variety of possible solutions and reaching a decision in collaboration with the external critic. The third semester, founded on the bases of the previous one, starts with an understanding of the whole environment as a system and building strategies for future possible scenarios for the sustainability of future heritage. It is clear that the first semester is place-based, the second one is problem-based and the third one is research-based. In that way, the student develops his own thinking process, from analytical, through

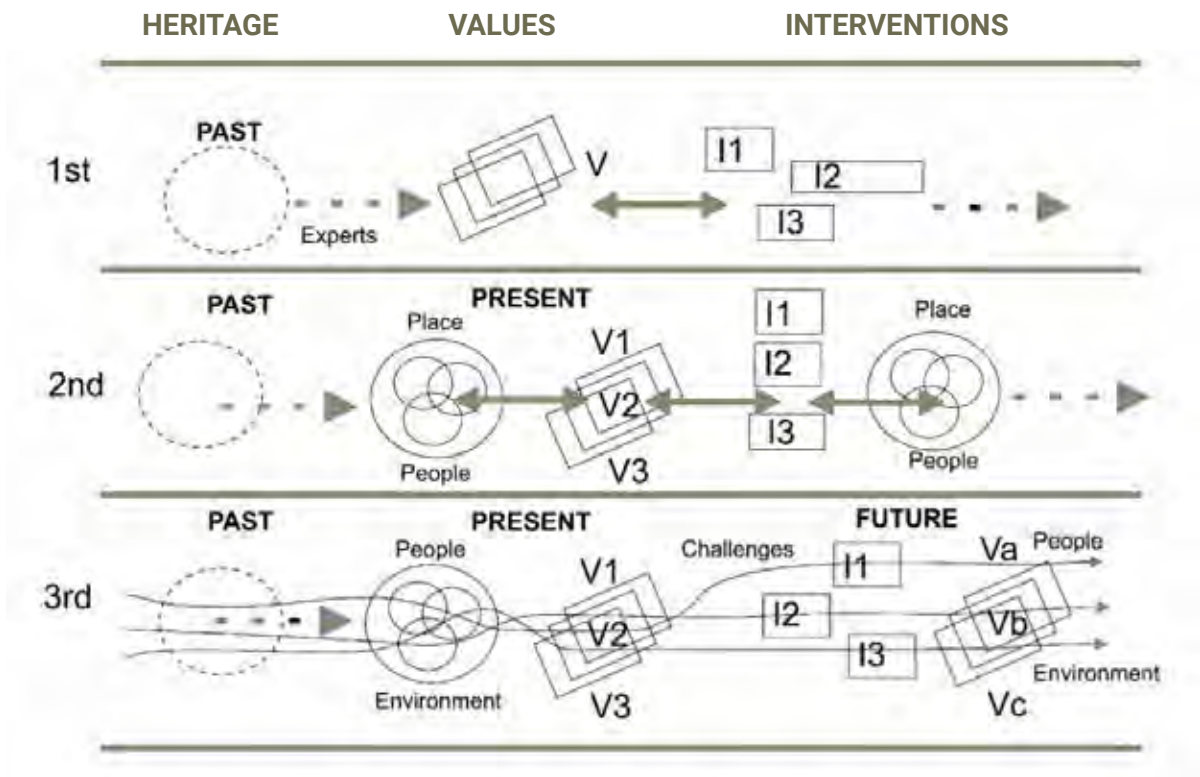


Figure 7. DESIGN studio features

critical, to reflect it, accepting all stages as a part of the complex multidisciplinary and multicultural context.

**1st semester focuses on UNDERSTANDING OF Key Challenges** in a specific historical context and the relation between Heritage and sustainability and develops and applies theoretical knowledge of characterization and documentation, valorisation and typology towards architectural and urban design evaluation of Spatial intervention.

**2nd semester focuses on UNDERSTANDING OF Key Challenges** in specific present everyday contexts and the relation between place and people and develops Inter and multi-disciplinary and multi-scalar approaches towards the multi-perspective evaluation of Spatial intervention.

**3rd semester focuses on UNDERSTANDING OF Key Challenges** in specific environments

and the relation between past-present-future (of) heritage and ever-changing natural and social environment and develops relational and dynamic approaches to establishing socio-ecological SYSTEMS and PROCESS, as part of the ENVIRONMENT towards different evaluation SCENARIOS of Spatial Interventions.

**2.3. SPECIALISATION – TOOLS AND ASSESSMENTS**

Specialisation UNIT is the backbone of the program. It covers a pool of courses that flow randomly through the first three semesters and could also pop up as needed depending on the present state of the arts or emerging problem or context. It is a variety of different tools and assessments and other skills that student needs or wants to profess during their

Table 3. Elements of the research and design process

		1st semester	2nd semester	3rd semester
	DESIGN STUDIO	HER-SUS	PEOPLE	ENVIRONMENT
<b>ELEMENTS OF THE RESEARCH &amp; DESIGN PROCESS</b>				
1	<b>PLACE PROFILE</b>	Urban fragment A historical place with a specific cultural protection aspect involved	Neighbourhood fragment Contested heritage / a place with specific history with a strong community aspect involved	Socio-ecological systems and processes Place with a strong presence of climate change, resilient challenges involved
2	<b>HERITAGE VALUES approach</b>	Conventions	Multivocality of heritage	Socio-ecological
3	<b>CHALLENGES and drivers of change</b>	Place-based design Value-based decision making through design on the architectural and urban level	Place-based design Wicked problem approach / Real multidisciplinary situation A design process that involves people	Place-based research Dynamic problem research – a system approach with Multiple scenarios Flexibility and adaptability introduced as part of the design process
4	<b>PROBLEMATIZATION</b>	Understanding historical and cultural context	Acting upon conflicting perspectives of the context	Managing change – SCENARIO building and STRATEGY /ALTERNATIVES development in relation to challenges
5	<b>SPATIAL INTERVENTION</b>		Multi-scalar RE design approach SOFT design approach	Environmental Landscape approach Scenario design approach
6	<b>HER- AUD* EVALUATION framework</b> *AUD – architecture and urban design	In relation to inherited values from the past (Cultural and historical agency)	In relation to community values of the present (Social, political and economic agency)	In relation to socio-ecological values of the future (Environmental Agency)

study, focussing on applied knowledge and strengthening certain areas of knowledge. Courses are conducted in different ways depending on the proposed topic. It is a unit of 6ECTS per semester or a total of 24ECTS during the MA program. It consists of courses of 3 or 6 ECTS credits depending on the course itself. It is mandatory for a student to conduct 24 ECTS throughout his master study program in this specific unit, with an average of 1 to 2 courses (average 6 ECTS) per semester, completing a total of 24 ECTS from this line. It is mandatory for a student to cover at least 3ECTS per semester and no more than 9ECTS per semester.

## 2.4. MASTER THESIS

The master thesis project represents the crown and finale of the proposed study program. It is designed in such a way that through a research-based project, acquired knowledge of an undoubted connection between heritage and the modern concept of sustainable development meets and intertwines.

While other courses of the imaginary study program possess a unique concept that is suitable for all the partner institutions, the Master Thesis retains and nurtures the specifics of the final work that each of the partner institutions expresses. In this way, continuity in the approach of each of the partner institutions is preserved, which could be considered a special quality of the entire perceived study program.

Table 1 – Review of basic characteristics and specifics of existing Master Thesis Units in each of the partner institutions

Table 1a: UBFA

Table 1b: luav

Table 1c: UCY

Table 1d: AUTH

Table 1e: USE



Table 1a, part 1: UBFA

Title of the Master Study Programme	A set of knowledge, skills and competence
<p><b>Master Academic Studies – Architecture</b></p> <p>Module A (Architecture)</p> <p>Module U (Urbanism)</p> <p>Module AT (Architectural Technologies)</p> <p>Module AE (Architectural Engineering)</p> <p><b>Amount of the Master Thesis Unit (ECTS)</b></p> <p>32 ECTS</p> <p><b>Duration of Master Thesis Unit</b></p> <p>8 months</p>	<p>Ability to generate complex design proposals showing understanding of current architectural issues, originality in the application of subject knowledge and, where appropriate, to test new hypotheses and speculations;</p> <p>Ability to evaluate and apply a comprehensive range of visual, oral and written media to test, analyse, critically appraise and explain design proposals;</p> <p>Ability to evaluate materials, processes and techniques that apply to complex architectural designs and building construction, and to integrate these into practicable design proposals;</p> <p>Critical understanding of how knowledge is advanced through research to produce clear, logically argued and original written work relating to architectural culture, theory and design;</p> <p>Understanding of the context of the architect and the construction industry, including the architect's role in the processes of procurement and building production, and under legislation;</p> <p>Problem solving skills, professional judgement, and ability to take the initiative and make appropriate decisions in complex and unpredictable circumstances;</p> <p>Ability to identify individual learning needs and understand the personal responsibility required to prepare for qualification as an architect.</p>

Parts of the Master Thesis Unit	Compulsory content in compliance with the requirements set forth in the standard	Matriculation requirements
<p><b>research-theoretical parts:</b> Part 1: Thematic research Part 2: Master thesis</p> <p><b>research-design parts:</b> Part 3: Master design project</p> <p><b>Final project parts:</b> Part 4a: Master final project – subject Part 4b: Master final project</p> <p><b>Duration of each Part of the Master Thesis Unit</b> Part 1: Thematic research: 6 weeks Part 2: Master thesis: 6 weeks Part 3: Master design: 15 weeks Part 4: Master final project - 11 weeks</p> <p><b>Number of contact hours (%)</b> Part 1: 33,33 % Part 2: 33,33 % Part 3: 33,33 % Part 4: 0 %</p>	<p><b>Thematic Research:</b> formulation of the research subject, research problem, and definition of the research topic – as a preparation for the work on Master Thesis, Master Design Project and Master Final Project.</p> <p><b>Master Thesis:</b> Preparation for the design phase, for the work on the research by design and Final Project and completion of the Master Thesis.</p> <p><b>Master Design Project:</b> Research by design phase – formulation of the design conception – preparation for the production of the Final Project.</p> <p><b>Master Final Project:</b> Synthesis of design knowledge and skills, where student, on his own, shows the level of knowledge and skills gained through the Master study program, as a continuation of previously set thesis and research. The student publicly presents graphical drawings, and final project model and a master portfolio that includes three clear sections: thesis, research by design with analytical and generic studies, and explanation of the final concept and final project.</p> <p>It is expected that the student, through the preparation of the Master Final Project, affirm acquired skills that correspond to the study program outcomes, in general, especially those related to the acquired skills and knowledge.</p>	<p>At least 110 ECTS</p> <p>88 ECTS (obligatory courses) + 20 ECTS (elective courses) + 2 ECTS (vocational practice)</p>

**Table 1b, part 2: UBFA**

<b>Title of the Master Study Programme</b>	<b>Degree or professional qualification, or degree and professional qualification to be awarded</b>
<p><b>Master Academic Studies – Architecture</b></p> <p>Module A (Architecture)</p> <p>Module U (Urbanism)</p> <p>Module AT (Architectural Technologies)</p> <p>Module AE (Architectural Engineering)</p> <p><b>Amount of the Master Thesis Unit (ECTS)</b></p> <p>32 ECTS</p> <p><b>Duration of Master Thesis Unit</b></p> <p>8 months</p>	<p><b>Master of Architecture</b></p> <p>(Modul Architecture: special competences in the field of architectural and urban design and realization of architectural structures;</p> <p>Module Urbanism - A Sustainable City: special competences in the field of architectural and urban design and urban planning;</p> <p>Module Architectural Engineering: in the field of architectural design, architectural engineering and realization of architectural structures;</p> <p>Module Architectural Technologies: special competences in the field of architectural design and realization of architectural structures).</p>



## Basic principles and procedures for the assessment of the Master Thesis Unit

**Thematic Research:** the student takes the exam in the January exam period, according to the current schedule, after which he is approved to continue working on the Master's thesis and Master's project. The exam can be taken only in one exam period.

The final individual exam for the achievement of the master's degree is evaluated by a board appointed at the beginning of the final semester of each academic year. The board consists of professors, representatives of the three professional domains: architectural design, urban design and urban planning and architectural engineering and technology. A three-member board verified at the beginning of the semester evaluates the students' work on Master Thesis Unit based on an insight into the students' research and design activities, written work and verbal abilities. The board evaluates the work of candidate according to the following structure: student research activities, visual and verbal presentation

**Master Thesis:** research activities 30 points, midterm exam 10 points, written work 50 points, oral presentation 10 points

**Master Design Project:** design process 30 points, midterm exam 10 points, design 50 points, oral presentation 10 points

**Master Final Project - subject:** process presentation 100 points

**Master Final Project:** design presentation 85 points, oral presentation 15 points

Fully developed Master Thesis Unit is exhibited at the final public exhibition

Nominations and selection of the best works within the study unit Master's final work refer to the selection of the best Master's theses and Master's projects. Nominations and selection consist of two steps/phases: a) the first step - selection of the best Master final works for the annual exhibition by the mentors, and b) the second step - selection of the best Master final works by the External Committee and their nomination for prominent national and international student awards in the field of architecture and urbanism.

All selected Master final works are presented in AF Files publication annually published by the faculty.

Table 1b, part 1: Iuav

Title of the Master Study Programme	A set of knowledge, skills and competence
<p><b>Architettura [B79]</b></p> <p><b>Amount of the Master Thesis Unit (ECTS)</b> 9 ECTS</p> <p><b>Duration of Master Thesis Unit</b> From 5 to 12 months</p>	<p>Ability to draw and design the shape and forms of architectural works, urban interiors and installations; ability to conduct research on the technological characteristics of materials and processes; ability to define procedures, and conduct autonomous analyses, to guarantee the functionality and safety of the structures, also with interventions for the care, conservation and restoration of the works. Management of building site activities.</p>
<p><b>MA – Architecture [B77]</b></p> <p><b>Amount of the Master Thesis Unit (ECTS)</b> 14 ECTS</p> <p><b>Duration of Master Thesis Unit</b> From 8 to 12 months</p>	<p>A thorough and solid cultural background, both humanistic and technical-scientific, needed to face the complexity of the contemporary architectural project and the recovery of the existing in its multidisciplinary. This is understood as the result of a dialogue between knowledge and skills necessary for the resolution of the operational problems posed by the city and the contemporary environment and related to the conservation and transformation of the different settlement contexts in which man lives and works with particular reference to environmental, economic and social sustainability.</p>

Parts of the Master Thesis Unit	Compulsory content in compliance with the requirements set forth in the standard	Matriculation requirements
<p>1 part = 8 ECTS</p> <p><b>Duration of each Part of the Master Thesis Unit</b></p> <p>From 5 to 12 months</p> <p><b>Number of contact hours (%)</b></p> <p>3%</p>	<p>The final exam consists of a presentation of projects and/or dissertations on specific topics related to the degree course, and it includes the presentation of an original thesis elaborated by the student under the guidance of a supervisor: a luav professor/researcher or a luav contract professor in charge in the academic year in which the student graduates</p>	<p>At least 76 ECTS A type (mandatory courses) + 18 ECTS C type (elective courses) + 8 ECTS D (elective courses) + 9 ECTS F (language skills and internship experience)</p>
<p>Two phases are distinguished: 1) the achievement of a qualification for the degree, managed through the Integrated Laboratory "<b>Research Lab</b>": 8 ECTS 2) the final discussion of the thesis, carried out under the supervision of a supervisor: 6 ECTS</p> <p><b>Duration of each Part of the Master Thesis Unit</b></p> <p>Part 1: 6 months Part 2: from 2 to 6 months</p> <p><b>Number of contact hours (%)</b></p> <p>Part 1: 10% Part 2: 3%</p>	<p>The research exercise generally requires the application of what has been learned during the training course and can represent its development through an in-depth study of the cultural contents integrated with additional elements and innovative ideas. It can have a design or theoretical experimental nature; it can concern the deepening of the design topic elaborated within one of the studios, or a new project theme.</p>	<p>At least 78 ECTS A type (mandatory courses) + 12 ECTS C type (elective courses) + 8 ECTS D (elective courses) + 8 ECTS F (language skills and internship experience)</p>

Table 1b, part 2: Iuav

Title of the Master Study Programme	Degree or professional qualification, or degree and professional qualification to be awarded
<p><b>Architettura [B79]</b></p> <p><b>Amount of the Master Thesis Unit (ECTS)</b> 9 ECTS</p> <p><b>Duration of Master Thesis Unit</b> From 5 to 12 months</p>	<p><b>Architect</b> (professional figure who has knowledge, tools and skills - including those defined in directive 85/384/EEC - allowing to address the project of the physical and responsible transformation of the environment in the various sectors and for distinct scales of intervention).</p>
<p><b>MA – Architecture [B77]</b></p> <p><b>Amount of the Master Thesis Unit (ECTS)</b> 14 ECTS</p> <p><b>Duration of Master Thesis Unit</b> From 8 to 12 months</p>	<p><b>European architect</b> (as required by directive 2005/36/EC of the European Parliament).</p>

## Basic principles and procedures for the assessment of the Master Thesis Unit

The topic and activities related to the thesis are agreed with the supervisor.

The aim of the final exam is to verify the ability of the graduating student to explain and discuss with clarity and mastery the strategies of approach, the methods of analysis and the communication techniques of design documents or research related to the specific architecture themes of the master's degree.

The final individual exam for the achievement of the master's degree is evaluated by a board appointed at the beginning of each academic year by the Rector. Each evaluation board is made up of three to five members, chosen among the professors in charge in the academic year in which the final exam takes place (including professors from other universities and contract professors).

The evaluation is based on the student's career and on the outcome of the discussion of the thesis.

The thesis evaluation is usually defined according to the following scores:

- up to 8 points for thesis with a high scientific-cultural content and presented clearly and with proper language;
- up to 5 points for theses with a moderate scientific-cultural content;
- up to 2 points for theses with a modest scientific-cultural content.

The honorable mention is assigned with the unanimous agreement of the commission, taking into consideration both the judgment on the thesis work and the overall career of the student.

For the dignity of publication, the unanimous commission evaluates the excellence of the cultural scientific contribution

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For the dignity of publication, the unanimous commission evaluates the excellence of the cultural scientific contribution

Table 1c, part 1: UCY

Title of the Master Study Programme	A set of knowledge, skills and competence
<p><b>Integrated Master in Architecture</b> (master thesis -advanced design studio)</p> <p><b>Amount of the Master Thesis Unit (ECTS)</b> 44 ECTS</p> <p><b>Duration of Master Thesis Unit</b> 2 Semesters</p>	<p>Ability to analyse with critical thinking a topic – an idea and design a proposal with architectural tools using any means of representation. Ability to work in different scales, to solve complex problems involving all different parameters and data (architectural, cultural, environmental, social)</p> <p>Ability to explain architectural proposals, link research with design</p> <p>Learn analytical and synthetic methods, conduct autonomous analysis and develop innovative proposals with theoretical concept.</p>
<p><b>Master in Conservation and Restoration of Historic Buildings and Sites</b> (independent final study)</p> <p><b>Amount of the Master Thesis Unit (ECTS)</b> 16 ECTS</p> <p><b>Duration of Master Thesis Unit</b> 1 semester</p>	<p>(theoretical project or a design based project)</p> <p>Ability to analyse critically and develop ideas on notions related to restoration and conservation.</p> <p>Ability to think critically, read scientific works and write in a scientific way</p> <p>Development of research abilities, and methods of studying and learning in the framework of themes related to cultural heritage and conservation</p>
<p><b>Master in Energy Technologies and Sustainable Design</b> (MSc thesis)</p> <p><b>Amount of the Master Thesis Unit (ECTS)</b> 40 ECTS</p> <p><b>Duration of Master Thesis Unit</b> 2 Semesters</p>	<p>Ability to follow a holistic research approach towards the topic of energy technologies and sustainable design</p> <p>Develop theoretical tools for research and analytical thinking, writing in a scientific way, analysing different parameters and discussing with a critical approach.</p>

Parts of the Master Thesis Unit	Compulsory content in compliance with the requirements set forth in the standard	Matriculation requirements
<p>2 parts (14+30 ECTS)</p> <p><b>Duration of each Part of the Master Thesis Unit</b></p> <p>Part I: 1 Semester (26 weeks) Part II: 1 Semester (26 weeks)</p> <p><b>Number of contact hours (%)</b></p> <p>1 every week</p>	<p>In the final year of study, a final thesis of architectural composition is required. The thesis topic is chosen by the student in consultation with his academic advisors. The topic of the thesis is defined based on the interests of the Department and the existence of necessary infrastructure and resources for its support. The student, upon registration, at the beginning of the academic year develops the proposal of his/her thesis.</p>	<p>60 ECTS: FINAL YEAR – 5 YEARS: 300 ECTS</p>
<p>1 part</p> <p><b>Duration of each Part of the Master Thesis Unit</b></p> <p>One part: 1 semester (26 weeks)</p> <p><b>Number of contact hours (%)</b></p> <p>2 times every month</p>	<p>At the end of the studies, after the successful completion of all other courses, each student has to prepare an independent research study that will be delivered to the supervisor by the end of the semester. The work should be original.</p>	<p>94 ECTS</p>
<p>1 part</p> <p><b>Duration of each Part of the Master Thesis Unit</b></p> <p>One part: 2 Semesters (52 weeks)</p> <p><b>Number of contact hours (%)</b></p> <p>2 times every month</p>	<p>For the Master degree M.Sc. it is required to carry out an individual research thesis. The topic of the student's research is chosen in coordination with his/her research supervisor preferably before the end of the first semester. The students must submit in writing to the interdepartmental committee an one-page summary of the thesis explaining the relevance to the discipline of the program, not later than six months prior to its explaining.</p>	<p>115 ECTS</p>

Table 1b, part 2: UCY

Title of the Master Study Programme	Degree or professional qualification, or degree and professional qualification to be awarded
<p><b>Integrated Master in Architecture</b> (master thesis -advanced design studio)</p> <p><b>Amount of the Master Thesis Unit (ECTS)</b> 44 ECTS</p> <p><b>Duration of Master Thesis Unit</b> 2 Semesters</p>	<p><b>Integrated Master in Architecture</b> Professional degree in Architecture</p>
<p><b>Master in Conservation and Restoration of Historic Buildings and Sites</b> (independent final study)</p> <p><b>Amount of the Master Thesis Unit (ECTS)</b> 16 ECTS</p> <p><b>Duration of Master Thesis Unit</b> 1 semester</p>	<p><b>Independent Study in the Master of Conservation and Restoration of Historic Buildings and Sites</b> Master degree in Conservation – professional theoretical and practical skills in order to work in the conservation sector</p>
<p><b>Master in Energy Technologies and Sustainable Design</b> (MSc thesis)</p> <p><b>Amount of the Master Thesis Unit (ECTS)</b> 40 ECTS</p> <p><b>Duration of Master Thesis Unit</b> 2 Semesters</p>	<p><b>Master in Energy Technologies</b> Master degree in Energy Technologies and Sustainable Design</p>

## Basic principles and procedures for the assessment of the Master Thesis Unit

After the advisory group approves the proposal, the Department of Architecture will appoint the Committee. The student's advisory group will chair and coordinate the thesis committee. The defence of the diploma Study is open to the public and consists of a thirty-minute presentation by the candidate, which may contain visual material, followed by a thirty-minute open discussion, and a closed meeting of the Examining Committee, at which a decision on the diploma is made. If the work is deemed satisfactory, the candidate must submit two original copies, one to the university library and one for the Department's records, as well as an electronic (PDF) version of the thesis for the Department of Architecture's records, for documentation and distribution. If the diploma is rejected, the candidate has the right to request a repetition of the procedure one more time. In this case, the time and conditions of the resubmission of the diploma are determined by the examination committee, within the framework of the rules of postgraduate studies of the University.

When the thesis is completed, the student must present it to an open audience, in front to the Examination Committee. The Examination Committee is composed of three members: the research supervisor as Chair of the committee and (at least) one faculty member from another department of the interdepartmental program. The members of the Committee must be selected based on their background so that they can help with the students' work. If the defence of the research is satisfactory, the Examination

Committee approves its successful completion. The thesis is accredited as Excellent, Very Well, Well. Students who complete a dissertation will have to submit the following to the central secretariat of the thesis (ETAS): 1) one printed copy of their dissertation and 2) a CD containing their dissertation in PDF format and their graphic abstract.

At the end of the studies, after the successful completion of all other courses each student has to prepare an independent research study that will be delivered to the supervisor by the end of the semester. The work should be original and should include literature review, references, methodology and results of the research as well as illustrations and other relevant material.



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Table 1d, part 1: AUTH

Title of the Master Study Programme	A set of knowledge, skills and competence
<p><b>Integrated Master Architecture</b></p> <p><b>Amount of the Master Thesis Unit (ECTS)</b></p> <p>42 ECTS</p> <p><b>Duration of Master Thesis Unit</b></p> <p>At least 6 months</p>	<p>Ability in all areas of architectural design of buildings, building complexes and sites, urban planning, spatial planning, landscape design, interior and industrial design, restoration and reuse of historic buildings and sites, environmental design and construction. Theory and history of architecture and art frame the design process, cultivating critical thinking and creativity, placing the architectural composition in the historical, social, cultural and environmental context that shapes it.</p>

Parts of the Master Thesis Unit	Compulsory content in compliance with the requirements set forth in the standard	Matriculation requirements
<p>Two parts:</p> <p>Part 1: Research diploma thesis (12 ECTS)</p> <p>Part 2: Design Diploma thesis (30 ECTS)</p> <p><b>Duration of each Part of the Master Thesis Unit</b></p> <p>Part 1: At least 6 months</p> <p>Part 2: At least 6 months</p> <p><b>Number of contact hours (%)</b></p> <p>Part 1 – there needs to be a minimum of three meetings between student and supervisor – usually 6-8 meetings take place in the semester.</p> <p>Part 1 - there needs to be a minimum of five meetings between student and supervisor – usually 6-10 meetings take place during the semester.</p>	<p>The "Research Diploma Thesis" should constitute an analytical investigation, documentation, synthetic processing and presentation of a topic that is linked to the curriculum of the School of Architecture and the academic subjects of the five Departments. The research essay is delivered in an edited issue in which the above is included, with possible images, tables, drawings, in a single set. The research is presented publicly, in the form of a lecture.</p> <p>The "Design Diploma Thesis" has as its object the processing of an architectural design proposal, through multiple scales, theoretical approaches and technical specializations that make up the object of design in the contemporary condition. Design thesis may focus on one or combine several of the individual specializations and thematic areas of architectural work with different emphases, with corresponding documentation requirements, while demonstrating that candidates possess the compositional and representational tools and technical proficiency.</p>	<p>Part 1: At least 207 ECTS (102 ECTS design studio, 36 ECTS specialization studio, 69 ECTS theory, technology, elective)</p> <p>Part 2: At least 228 ECTS (114 ECTS design studio, 42 ECTS specialization studio, 72 ECTS theory, technology, elective)</p>



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Table 1b, part 2: AUTH

<b>Title of the Master Study Programme</b>	<b>Degree or professional qualification, or degree and professional qualification to be awarded</b>
<p><b>Integrated Master Architecture</b></p> <p><b>Amount of the Master Thesis Unit (ECTS)</b></p> <p>42 ECTS</p> <p><b>Duration of Master Thesis Unit</b></p> <p>At least 6 months</p>	<p><b>Diploma of Architect Engineer (Integrated Master)</b></p> <p>A professional who has the knowledge to practice in all areas of architectural design of buildings and complexes, urban planning, landscape design, interior design, restoration and reuse of historic buildings and sites. Obtaining the diploma does not directly make the holder a licensed architect. In order to obtain the license one needs to be a member of the Technical Chamber of Greece (TEE), which is a requirement for practicing architecture, in accordance with the current institutional framework in Greece. In order to become a member of the TEE architects sit exams which are nevertheless nowadays a typical exercise</p>

## Basic principles and procedures for the assessment of the Master Thesis Unit

**Research Diploma Thesis:** Students must present to the supervisor parts and intermediate revisions of the design thesis and have regular meetings with him/her during the 9th semester and in no case less than 3.

Upon completion of the research thesis and with the agreement of the supervisor, students declare their intention to present their essay and be examined in the context of the relevant examination period.

The presentations of the research diploma thesis are made during the three prescribed periods immediately after the completion of the examination period of the courses (February, June and September).

The research thesis is presented publicly, in the form of lecture. The presentation lasts 20 minutes. This is followed by a 10-minute period for clarifications and questions from the jury and the audience.

The evaluation of the research thesis is done by the supervisor and the evaluator based on its scientific composition, as well as diligence and completeness in relation to the research questions. Plagiarism is not allowed under any circumstances.

**Design Diploma Thesis:** Students must present to the supervisor parts and intermediate revisions of the design thesis and have regular meetings with him/her during the 10th semester and in no case less than 5.

The presentations of the design diploma thesis are made during the three prescribed periods immediately after the completion of the examination period of the courses and after the research diploma thesis presentations (February, June and September).

The design thesis is presented publicly, in the form of drawings, models, and other means of representation. The presentation lasts 30 minutes. This is followed by a 15-minute period for clarifications and questions from the examining committee and the audience.

The evaluation of the design thesis is done by the supervisor and the three-member examining committee, based on its compositional quality, creativity, technical proficiency, care and completeness.



**Table 1e, part 1: USE**

Title of the Master Study Programme	A set of knowledge, skills and competence
<p><b>USE Master Thesis Analysis</b></p> <p><b>Amount of the Master Thesis Unit (ECTS)</b> 30 ECTS</p> <p><b>Duration of Master Thesis Unit</b> 1 Year</p>	<p>The official master's degree of the University of Seville has three levels of competences: Basic, General and Specific. The basic competences are presented below and the rest of the competences are completed in the appendix.</p> <p>Basic competences:</p> <p>CB.01. Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context.</p> <p>CB.02. Know how to apply knowledge to one's work or vocation in a professional manner and possess the competences usually demonstrated through the development and defence of arguments and the resolution of problems within the field of architecture.</p> <p>CB.03. Have the ability to gather and interpret relevant data in the field of architecture, in order to make judgements that include a reflection on relevant social, scientific or ethical issues</p> <p>CB.04. Ability to transmit information, ideas, problems and solutions to both specialised and non-specialised audiences.</p> <p>CB.05. To have developed those basic learning skills necessary to undertake further studies with a high degree of autonomy.</p>

Parts of the Master Thesis Unit	Compulsory content in compliance with the requirements set forth in the standard	Matriculation requirements
<p>One part of 30 ECTS</p> <p><b>Duration of each Part of the Master Thesis Unit</b></p> <p>1 Year</p> <p><b>Number of contact hours (%)</b></p> <p>5h/ECTS (150 h) [600+150] 20%</p>	<p>The programme lasts one academic year, organised with two subjects from the Design module in the first semester (Advanced Projects in Architecture, 14 ECTS, and Urban Planning and Projects, 6 ECTS), and another two from the Technical module in the second semester (Structures and Foundations and Construction and Installations, both 5 ECTS each)</p>	<p>Those who wish to be admitted to university master's degrees (commonly known as official master's degrees) must be in one of the following situations:</p> <ol style="list-style-type: none"> <li>1. Holding a degree in Architecture, Engineering, Technical Architecture, Technical Engineering or Master's degree, or another expressly declared equivalent.</li> <li>2. Holding a foreign university degree issued by a higher education institution of the European Higher Education Area that entitles the holder to access master's degree courses in the country issuing the degree.</li> <li>3. Holding a foreign university degree, equivalent to degree level in Spain, but which has not been recognised by the Spanish Ministry of Education and which entitles the holder in their country of origin to take postgraduate studies.</li> </ol>



Table 1b, part 2: USE

Title of the Master Study Programme	Degree or professional qualification, or degree and professional qualification to be awarded
<p><b>USE Master Thesis Analysis</b></p> <p><b>Amount of the Master Thesis Unit (ECTS)</b></p> <p>30 ECTS</p> <p><b>Duration of Master Thesis Unit</b></p> <p>1 Year</p>	<p><b>Architect</b></p>

## Basic principles and procedures for the assessment of the Master Thesis Unit

The teaching teams will provide the students in their group with a brief written assessment of their proposal at least at two intermediate points in the course. Students should be provided with an assessment of the topic developed, as well as of the basic strategies used for the approach of the proposal. The continuous evaluation, the public exchange of information, the analysis and the critical sessions of the work do not make sense without the permanence and constant participation of teachers and students. For this reason, the student will have to attend a minimum of 80% of the classes and will have to carry out all the tasks set out in the Teaching Projects in order to be assessed.

For the assessment, the minimum composition of each committee will be four members and the maximum will be the equivalent of the entire teaching team, in addition to a professional of recognised prestige.

In the assessment of the Final Master Design Thesis, the completeness and adequacy of the printed documentation submitted will be taken into account, and the level of development achieved and the overall quality of the final proposal will be considered, as well as the process followed and the coherence achieved between the objectives and the results obtained.

The evaluation criteria will address, in addition to those established in the Teaching Projects, the following questions:

- Coherence between the objectives set and the results obtained.
- Clarity of exposition and mastery of the exercise in the presentation of the Final Master Design Thesis.
- Appropriateness and soundness of the arguments used to define the architectural, town planning and construction.
- Verification of the achievement of the Learning Outcomes of this programme.

A sufficient level of mastery of all the specific objectives of this programme will be required. The qualification will be issued in two phases.

In the first phase, a pass/fail grade will be obtained for the work; for this, the project presented by the student must be approved by at least half of the members of the assessment committee present at the assessment session.

In the second phase, the student's grade will be determined by consensus or, failing that, by the weighted average of the members, establishing the weighting with respect to the percentages of participation in the teaching of the subject of each of them. The professional of recognised prestige shall be awarded the percentage equivalent to the highest of the established percentages.

However, the framework of the Master Thesis Unit is thought of as unique regarding the number of credits, duration of the unit, and elements or constituent parts of the master thesis. Hence, in the core of the study program, the last, fourth semester is devoted exclusively to the performance of the final, i.e. diploma work or a Master Thesis. Therefore, in total, this module values 30 ECTS credits. Analysis of the existing concepts of master thesis projects of the partner institutions showed that there are three specific parts and elements of the thesis – research, design, and a part that is in relation to practice. They are, in all cases, constitutive parts of the student’s work, although they are represented in different scopes depending on the partner institution. Following this kind of logic, the Master Thesis of the imaginary study program should contain three compulsory constitutive parts – Research (R), Design (D), and Practice (P), each part valuing at least 6 ECTS. In this way, partner institutions have the freedom to adjust the number of credits for each of the constitutive parts according to the needs, specifics, and traditions of their institutions.

Table 2 – Proposed template of the Master Thesis Unit

GENERAL BACKGROUND – TITLE AND FORMAT OF THE COURSE							
	TITLE	COURSE STATUS	semester	DURATION	ECTS	METHODS OF EVALUATION	
MODULE	MASTER THESIS	to be introduced by each partner institution	elective	4	one semester	30	to be introduced by each partner institution
Parts of Master Theses	RESEARCH/THEORETICAL PART	to be introduced by each partner institution			min 6	to be introduced by each partner institution	
	DESIGN PROJECT	to be introduced by each partner institution		At least ½ semester	min 6	to be introduced by each partner institution	
	IN RELATION TO PRACTICE	to be introduced by each partner institution			min 6	to be introduced by each partner institution	
SYLLABUS							
SYLLABUS							
MODULE	MASTER THESIS	to be introduced by each partner institution, adjusted to its specific approach					
Parts of Master Theses	RESEARCH/THEORETICAL PART	to be introduced by each partner institution, adjusted to its specific approach					
	DESIGN PROJECT	to be introduced by each partner institution, adjusted to its specific approach					
	IN RELATION TO PRACTICE	to be introduced by each partner institution, adjusted to its specific approach					



Figure 8. Design and Development meeting in Thessaloniki, Greece

# HOW TO READ HERSUS BOOK OF COURSES

1

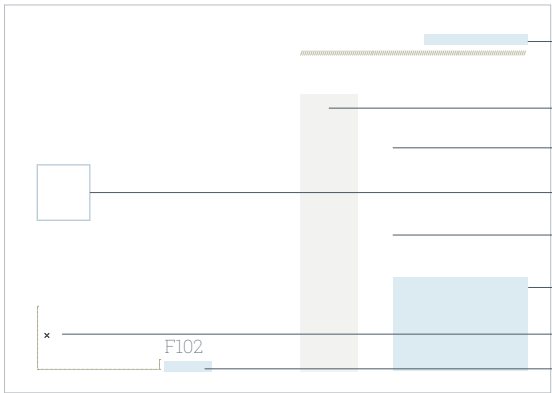
GENERAL INFO  
ON COURSE AND  
AUTHORS

2

RELATION TO IO3  
SYLLABUS,  
METHODOLOGY  
AND COHERENCE  
IN BETWEEN

3

ASSESSMENT,  
COURSE  
STRUCTURE AND  
LITERATURE



COURSE TITLE

COURSE ID CARD

EXPECTED PRIOR KNOWLEDGE

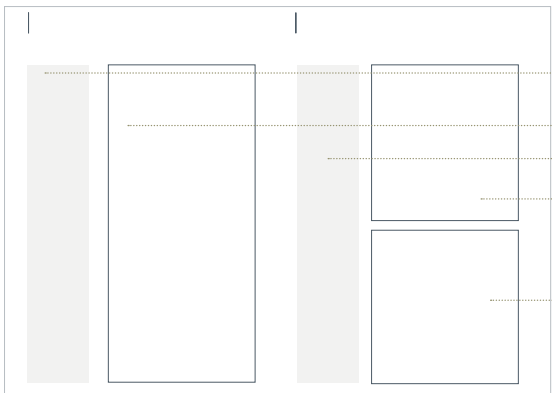
LOGO

COURSE OBJECTIVE

ILLUSTRATION

PREPARED BY

TYPE OF COURSE AND CODE



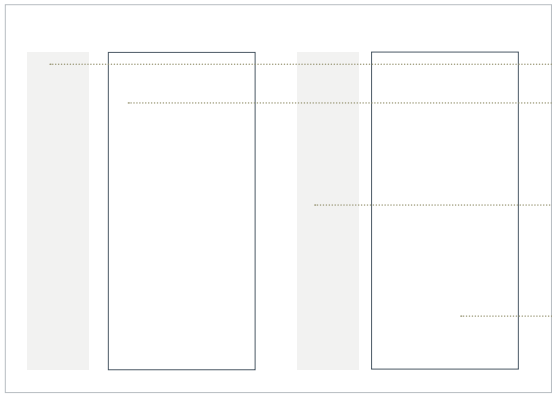
RELATION TO IO3 STATEMENTS

COURSE SYLLABUS

METHODOLOGY - TEACHING

course syllabus in relation to course objectives

teaching methodology in relation to course objectives



ASSESMENT METHODS

COURSE STRUCTURE

LEARNING OUTCOMES

■ □ Checklists

LITERATURE

# COURSES

# FUNDAMENTALS

Fundamentals 1

×

Fundamentals 2

×

Fundamentals 3

×

Applied fundamentals 1

×

Applied fundamentals 2

×

Applied fundamentals 3

F101

**fundamentals**

book of courses

# LINKING HERITAGE AND SUSTAINABILITY

## COURSE ID CARD

semester	1
ECTS	9
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	5
OFL	
SRW	
Other	

### Expected Prior Knowledge

Basic knowledge of architectural and urban design, history of architecture, and building technology, gained during the architecture-related bachelor studies;

### Course Content

The course should provide fundamental theoretical and methodological knowledge that would enable students to raise heritage awareness, and understand relevant aspects of heritage and sustainability relative to architecture and urban design, establishing a common ground for students having backgrounds in various programs.

The focus of the course is on understanding the past of the built heritage in the light of the processes and ways of their creation, the lived phases of the life cycle, as well as the existing - present state that would enable students to recognize relevant values and attributes, to understand their meaning and importance, and to establish a relation to the notion, principles and elements of sustainability.

Key theoretical issues and challenges that will be taught during the course refer to the notion of heritage, History and Theory of Restoration, Conservation Status Evaluation, and Conservation Science, seen in the frame of environmental protection and sustainability, following the key framework in the sense of Heritage Charters, Declarations and Principles, other legislation related with protection of built and natural environment, as well as key issues of environmental design including Sustainable Development Goals (SDG).

Key design approaches in this semester and course refer to the protection approach and include problems of preventive conservation, conservation, restoration, reconstruction, revitalization, etc. that will be implemented in the design studio.

To better understand the investigating problem and the way it should be analyzed and described, students will also be introduced to basic elements of academic reading and writing, as well as to the tools that will enable them to understand, document and evaluate the analyzed built heritage.

## STUDY GOALS AND OUTCOMES

### Goal

With the general idea in mind, that the complexity of how the issues of heritage/sustainability are approached, learned, and implemented in the students' learning activities, grows gradually through semesters, the role of the 1st semester is to provide fundamentals for further studies/semesters and to establish the common ground for students coming from various programs.



### Challenge

The complexity of the built heritage and the way of facing and dealing with it at all scales would be taught by referring to:

- the notion of heritage and heritage genealogy – types and forms of heritage, values and attributes, forms and uses;
- heritage decay processes;
- understanding the relationship between heritage and sustainability, in the first place the reason why protection, preservation, and reuse of heritage represent a sustainable act;
- understanding vulnerability and risks related to the built heritage;
- aspects of heritage management;



### Outcome

Following the integral protection approach, students will learn how to approach the heritage and develop knowledge that will enable them to perform the following methodological and practical steps on the built heritage:

- survey and identification of values and attributes, including pathology issues;
- characterization and documentation;
- valorization;
- designing strategies and actions;
- presentation of the built heritage;
- monitoring and maintenance;

Students will also develop relevant skills, such as:

- context analysis tools;
- building heritage analysis tools (survey, mapping, documenting, cataloging, HBIM,...);
- heritage evaluation and assessment tools;

Gained skills will enable students to perform relevant on-site analyses on the built heritage and to document and evaluate it properly.



## METHODS

### ► Education Methods

The course will be delivered through lectures, seminars, on-site and site-specific analysis workshops using different approaches (exploratory, prescriptive, normative, comparative, creative)

The course will be accessed through group discussion, small assignments and individual written assignments.

The focus is on critical discussion, mutual support and feedback with students having the opportunity to direct their own learning by their engagement with suggested materials and exchange with others through shared insights, experiences and stories outside the classroom, to encourage awareness and reflection inspired by experiences of places.

### ▼ Methods of Evaluation

Pre exam	<ul style="list-style-type: none"><li>• <b>Assignment I - Mutual in-group brief presentations – PechaKucha format / concepts of heritage and sustainability</b></li><li>• <b>Pre-submission of Assignment I presentation (20 slides) + 20 seconds text / each</b></li><li>• <b>Assignment II – From concepts to site specificity; Public presentation / engagement on issues of heritage &amp; sustainability on the field</b></li><li>• <b>Pre-submission of Assignment II findings – on-site work and commentary/ journal</b></li></ul>
Final exam	<ul style="list-style-type: none"><li>• <b>Production of a paper within the exam period – the theme is given by the final day of classes – the paper builds upon assignments I, II and includes further elaboration through literature review and theoretical grounding on the provided bibliography</b></li></ul>

### ▼ COURSE STRUCTURE

1	<b>Introduction lecture – linking heritage and sustainability</b>
2	<b>Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, interview ....)</b>
3	<b>Key Challenges</b>
4	<b>Key Challenges</b>
5	<b>Practical skills 2</b>
6	<b>Pre examination activity / discussion assignment 1</b>
7	Key framework and concepts
8	Key framework and concepts
9	Pre examination activity / case study
10	Key design strategies
11	Key design strategies
12	Practical skills 3
13	Pre examination activity / discussion case study
14	Case Study
15	Wrap-up lecture

## LEARNING OUTCOMES

<b>GC1</b>	1.1
	1.2
	1.3
<b>GC2</b>	2.1
	2.2
	2.3
<b>GC3</b>	3.1
	3.2
	3.3
<b>GC4</b>	4.1
	4.2
	4.3
<b>GC5</b>	5.1
	5.2
	5.3
<b>GC6</b>	6.1
	6.2
	6.3
<b>GC7</b>	7.1
	7.2
	7.3
<b>GC8</b>	8.1
	8.2
	8.3
<b>GC9</b>	9.1
	9.2
	9.3
<b>GC10</b>	10.1
	10.2
	10.3
<b>GC11</b>	11.1
	11.2
	11.3

**\*Index list provided in the Annex 1**

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F201  
**fundamentals**  
book of courses

# LINKING HERITAGE, SUSTAINABILITY, PEOPLE AND ENVIRONMENT

## COURSE ID CARD

semester	2
ECTS	9
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	5
OFL	
SRW	
Other	

### Expected Prior Knowledge

To be eligible for admission to this course, students should have finished FUN AMENTALS 1

### Course Content

This course provides students with theoretical and methodological knowledge required to deal with heritage in its direct relationship to present. It would enable students to raise awareness on everyday, more modest, non-exceptional and contested heritage, which is less appreciated and in more danger of disappearance. The contents acknowledge heritage through people addressing the present within the past. In this sense, this type of heritage is close to people, to community, and this means that students will have the opportunity to integrate the social component (sensibilization and real participation and commitment of community) to the link between heritage and sustainability.

The focus of the course is on understanding the built heritage in the light of the contemporary urban processes and crisis, as well as to understand pros and cons in the process of managing it as a part of everyday life of local community. It will enable students to recognize relevant values and potential to understand their meaning and importance as to establish a common ground and a critical position for its possible reuse.

The course should help students reassess existing heritage and built environment in line with contemporary needs of society for a meaning, purpose and appearance other than one which it was originally built or designed for and be able to apply them, through critical and value-based approach, in Design studio. Key design approaches in this course refer to the RE-approach in line with design for all and participatory strategies and includes problems of reprogramming, regeneration, reuse, renewal, as well as potentials of soft interventions, tacit urbanism and urban acupuncture.

To better understand the overall problem and the way it should be analyzed and investigate, students will also be introduced with core principles of On-site analysis, as to incorporate the sensorial, affective and emotional aspects of the knowledge, and integrate it properly with the rational knowledge (field walk, mental maps collaborative mapping, space syntax, contextual reading, collective memory interpretation, transect walk, sketches, drawing, collages). Students will be taught how to systematize the practical aspects of them and finally develop a personal and critical perspective within this process of understanding and recognizing the social sustainable dimension of heritage.

## STUDY GOALS AND OUTCOMES

### Goal

The role of the 2nd semester is to introduce social and cultural dimension to the already established knowledge of HER-SUS. The special focus in 2nd semester is on the relationship between the PAST and PRESENT, as well as how PEOPLE relate to heritage. CONTEXT, VALUES AND USES of heritage are the key issues to be explored in order to help students learn on how can built heritage be adjusted to the contemporary needs of PEOPLE AND SOCIETY.



### Challenge

The complexity of the built heritage and the way of facing and dealing with it would be taught referring to Key challenges seen through poles of Global/Local, Urban/Rural, Public/Private (challenges regarding ownership, accessibility, funding, jurisdiction), Tangible/Intangible, Past/Present, Non-exceptional/Monumental.



### Outcome

Following the Inclusive approach, students will learn how to deal with built heritage and encourage critical position questioning a) Contested and Non-exceptional heritage and Everyday life/Everyday Heritage, b) Heritage multi-scalarity / architecture, city, territory, c) Heritage typology and also d) Social inclusion and agency.

Students will develop knowledge that will enable them to perform the following methodological and practical steps on the built heritage understanding the relationship between heritage, sustainability and people, the reason why involving people and community through participation, design for all, creating an attractive, open and accessible environment represent a sustainable act in protecting built heritage, i.e., understanding vulnerability and risks related to the built heritage.



## METHODS

### ► Education Methods

The course will be delivered through lectures, seminars, on-site and site-specific analysis workshops using different approaches (exploratory, prescriptive, normative, comparative, creative)

The course will be accessed through group discussion, small assignments and individual written assignment.

The focus is on critical discussion, mutual support and feedback with students having the opportunity to direct their own learning by their engagement with suggested materials and exchange with others through shared insights, experiences and stories outside the classroom, to encourage awareness and reflection inspired by experiences of places/communities.

### ▼ Methods of Evaluation

Pre exam	<ul style="list-style-type: none"><li>• <b>Assignment I- Brief Public presentations to local communities – PechaKucha format / concepts of heritage and sustainability_Scientific Knowledge and community participation</b></li><li>• <b>Pre-submission of Assignment I presentation (20 slides) + 20 seconds text / each – making concepts valid for the community</b></li><li>• <b>Pre-submission: Assignment IIa – Bibliographic research - Public engagement on issues of heritage &amp; sustainability. Assignment IIb - Field work on applying the metrics/processes/etc of public participation journal</b></li></ul>
Final exam	<ul style="list-style-type: none"><li>• <b>Production of a collective event combining the presentation of work for the community on heritage/sustainability issues</b></li><li>• <b>Submission of paper / commentary on applied methodologies and grounding on theory and best practices.</b></li></ul>

### ▼ COURSE STRUCTURE

1	<b>Introduction lecture – linking sustainability, heritage and people</b>
2	<b>Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, interview ....)</b>
3	<b>Key Challenges</b>
4	<b>Key Challenges</b>
5	<b>Practical skills 2</b>
6	<b>Pre examination activity / discussion assignment 1</b>
7	Key framework and concepts
8	Key framework and concepts
9	Pre examination activity / case study
10	Key design strategies
11	Key design strategies
12	Practical skills 3
13	Pre examination activity / discussion case study
14	Case Study
15	Wrap-up lecture

## LEARNING OUTCOMES

<b>GC1</b>	1.1
	1.2
	1.3
<b>GC2</b>	2.1
	2.2
	2.3
<b>GC3</b>	3.1
	3.2
	3.3
<b>GC4</b>	4.1
	4.2
	4.3
<b>GC5</b>	5.1
	5.2
	5.3
<b>GC6</b>	6.1
	6.2
	6.3
<b>GC7</b>	7.1
	7.2
	7.3
<b>GC8</b>	8.1
	8.2
	8.3
<b>GC9</b>	9.1
	9.2
	9.3
<b>GC10</b>	10.1
	10.2
	10.3
<b>GC11</b>	11.1
	11.2
	11.3

**\*Index list provided in the Annex 1**

## ≡ LITERATURE

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F301

**fundamentals**

book of courses

# LINKING HERITAGE AND SUSTAINABILITY

## COURSE ID CARD

semester	3
ECTS	9
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	5
OFL	
SRW	
Other	

### Expected Prior Knowledge

To be eligible for admission to this course, students should have finished FUN AMENTALS 1 and 2

### Course Content

The course provides students with theoretical and methodological knowledge that would enable them to understand and deal with heritage as a part of ever-changing natural and social environment. It builds upon knowledge gained in previous semesters in order help students develop more dynamic understanding of heritage as a concept that links past, present and future. In that context, the role of heritage in sustainable development is discussed by focusing on its possible use as a (re) source of continuity or change, and problematized in relation to variety of risks and challenges as well as needs and values for future societies.

The focus of the course is on relating the built heritage to social and ecological systems and processes in order to help students understand complex and dynamic nature of heritage and recognise key threats and opportunities, as well as potential uses of heritage as a basis for sustainable development.

The course builds upon the ecological approach to socio-spatial environment (understood as palimpsest), as a general theoretical framework for understanding the dynamics, vulnerability and potentials of heritage in relation to development. It will provide students with basic knowledge on resilience and socio-ecological systems theories, as well as on environmental/ecological/integral/sustainable/green/participatory design theories. In that context, the special attention will be paid to linking heritage to the concepts related to change (resilience, risk, uncertainty, vulnerability), but also to different strategies to address inevitable changes (flexibility, adaptability, multi-functionality, nature-based solutions...). Besides that, this semester will provide students with additional focus on economic dimension of sustainability by introducing the concepts of circularity, efficiency and urban metabolism

The course should help students analyse heritage and built environment in relation to the variety of developmental challenges, in order to envision and assess their meaning, purpose and appearance in relation to both contemporary and future needs of society, and apply them in Design studio, through critical and systemic approach.

## STUDY GOALS AND OUTCOMES

### Goal

The role of the 3rd semester is to approach the concept of HERITAGE from the perspective of PROCESS and CHANGE, and to establish links between the PAST, PRESENT and FUTURE. The special focus is on the ever-changing ENVIRONMENT, as well as on the issues of uncertainty/risk/opportunities, and management of change through architecture and urban design.



### Challenge

The dynamic and complexity of the built heritage would be taught referring to the key challenges such as: Climate change; Pandemic and health; Conflicts and social cohesion; Globalization, multiculturalism and digitalization; Urbanization (sprawl/shrinking, density/intensity); Social and environmental inequalities and justice. The purpose is to understand how they function as threats and/or opportunities for heritage in relation to sustainable development. Additional challenge would be to provide students with opportunity to think of heritage and built environment in relation to what they mean for elusive future societies, and how can they be used to improve the environment.



### Outcome

Following the socio - ecological approach, students will develop dynamic and systemic view, and learn how to critically approach and deal with built heritage in relation to notions of: Resilience, Risk, Uncertainty, Vulnerability, Urban metabolism, Circularity, Regenerative development, Inclusiveness, Health and wellbeing, Living and Future heritage.

Students will develop knowledge on research methods and techniques for managing change through architecture and urban design, as well as on the methodological and practical steps for performing analysis and investigating alternative and future-oriented spatial interventions that link heritage and sustainability. They will gain knowledge about the context, potential and the logic of use for: a) Specific mapping analysis tools (GIS, BIM, Space syntax, Envi Met...), b) Tools for developing environmental strategies (scenario planning, simulations, modelling), and c) Specific valuation/Assessment tools for socio-environmental impact and effects.

Linking theoretical and methodological knowledge with student-centred teaching and learning activities will help students develop critical and systems thinking skills.



## METHODS

### ► Education Methods

The course will be delivered through lectures, seminars, on-site and site-specific analysis workshops using different approaches (exploratory, prescriptive, normative, comparative, creative)

The course will be accessed through group discussion, small assignments and individual written assignment.

The focus is on critical discussion, mutual support and feedback with students having the opportunity to direct their own learning by their engagement with suggested materials and exchange with others through shared insights, experiences and stories outside the classroom, to encourage awareness and reflection inspired by experiences of places/communities.

### ▼ Methods of Evaluation

Pre exam

- **Assignment I -Public presentation of paper / small conference format on themes / thematic areas of change.**
- **Pre-submission of Assignment I paper**
- **Assignment II - Public presentation of the case studies in the form of an exhibition (posters).**
- **Pre-submission of Assignment II paper and poster journal**

Final exam

- **Submission of Assignments I,II, etc. in the form of a binder with intro and conclusions**

### ▼ COURSE STRUCTURE

1	<b>Introduction lecture – linking sustainability, heritage and people and environment</b>
2	<b>Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, interview ....)</b>
3	<b>Key Challenges</b>
4	<b>Key Challenges</b>
5	<b>Practical skills 2</b>
6	<b>Pre examination activity / discussion assignment 1</b>
7	Key framework and concepts
8	Key framework and concepts
9	Pre examination activity / case study
10	Key design strategies
11	Key design strategies
12	Practical skills 3
13	Pre examination activity / discussion case study
14	Case Study
15	Wrap-up lecture

## LEARNING OUTCOMES

GC1	1.1
	1.2
	1.3
GC2	2.1
	2.2
	2.3
GC3	3.1
	3.2
	3.3
GC4	4.1
	4.2
	4.3
GC5	5.1
	5.2
	5.3
GC6	6.1
	6.2
	6.3
GC7	7.1
	7.2
	7.3
GC8	8.1
	8.2
	8.3
GC9	9.1
	9.2
	9.3
GC10	10.1
	10.2
	10.3
GC11	11.1
	11.2
	11.3

**\*Index list provided in the Annex 1**

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- ANSYS CFD <http://www.ansys.com/>
- Climate consultant <http://www.energy-design-tools.aud.ucla.edu/>
- Design builder <http://www.designbuilder.co.uk/content/view/14/36/>
- DIVA <http://diva4rhino.com/>
- Energy Plus E+ <https://energyplus.net/>
- Integrated Environmental Solutions <https://www.iesve.com/software/building-energy-modeling>
- Envimet <https://www.envi-met.com/>
- IDA ICE <http://www.equa.se/en/ida-ice>
- Meteonorm [www.meteonorm.com](http://www.meteonorm.com)
- Open Studio <https://www.openstudio.net/>
- Radiance <http://www.radiance-online.org/> or <http://radsite.lbl.gov/radiance/>
- RayMan <http://www.urbanclimate.net/rayman/index.htm>
- RETScreen, Renewable Energy Project Analysis Software <http://retscreen.gc.ca>
- SkyHelios <https://www.urbanclimate.net/skyhelios/>
- Sun earth tools [http://www.sunearthtools.com/dp/tools/pos\\_sun.php?lang=en#help\\_Date](http://www.sunearthtools.com/dp/tools/pos_sun.php?lang=en#help_Date)
- Comfort indices <http://comfort.cbe.berkeley.edu/>
- Comfort indices <http://centerforthebuiltenvironment.github.io/mrt/>
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prepared by Julia Rey-Pérez; Marta  
García-Casasola

F102

**applied fundamentals**  
book of courses

# HERITAGE PROCESSES IN SUSTAINABLE MANAGEMENT

## COURSE ID CARD

semester	1
ECTS	3
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures	8
Exercises	7
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- ▶ Theory Course
- Seminar
- ▶ Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- Individual work
- ▶ Group work
- ▶ Supervision
- ▶ Master class

### Expected Prior Knowledge

The contents of the course address the evolution of the concept of heritage throughout the 20th and 21st centuries, incorporating all types of heritage, from monuments to the landscape as a container of heritage. It also reviews the strategies for managing cultural heritage in the 21st century and identifies new models of heritage city management based on urban governance and the heritage-sustainability binomial, as well as the challenges for the 21st century and the 2030 Agenda. The course is structured alternating sessions with a more conceptual and critical vocation with practical sessions where both group work and individual work are developed. In this practical part of the course, the students overturn the contents of the first part of the class. In both cases and on a different scale, students' work deals with a case study - a building with its surroundings, an area of the city or territory- in which they identify heritage values and attributes in order to define strategies and criteria for intervention. Basically, the course aims to introduce the student to methodologies of intervention in heritage, which can be structured in three phases: heritage identification (research and documentation), cultural values, and conservation project.

### Courses objectives

The course aims to ensure that students learn the historical and cultural knowledge necessary for carrying out diagnoses and heritage assessments of architecture, the city, and those territorial elements that form part of the landscape. Likewise, students will be able to structure and apply the theoretical, critical and instrumental elements of the preliminary studies required for architectural interventions for the rehabilitation of built heritage. In addition, the course aims to make students aware that heritage and culture are current resources that contribute to local development and the local economy and are therefore considered key elements of urban, economic, and social sustainability. Another aim is that the student is the main character of the learning process, where in addition to acquiring responsibilities and critically approaching the contents provided in the subject, he/she exchanges points of view and experiences with his/her classmates. In groups 3-4 students they will implement the heritage methodology provided by the contents of the course.

### Course illustration.



"LANDSCAPE VALUES" Hydraulic Museum. Martos Mill (Córdoba, Spain) Arch. J. Navarro Baldeweg Source: Students HTCA3 2021-22. A. García-L. Gómez-S. Guerrero-PPérez

## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural studies, cultural diversity
- Heritage Genealogy

### HERITAGE TYPES

- Urban Heritage
- Cultural Landscape

### DESIGN APPROACHES

- Heritage Reprogramming
- Historical Urban Landscape (HUL)

### DESIGN ACTIONS

- Heritage Management
- Adaptive Reuse

### TOOLS

- Collaborative Cartography
- Heritage Values Matrix

## ☰ Course Syllabus

The contents are divided in three blocks for 15 weeks:

### Unit 1\_Approaching to territory and culture

W1 (lecture): Heritage concept from the sustainable point of view: object to landscape. Case study of Cultural Landscape Management

W2 (Exercise): identification of the study area: collection of materials

W3 (Exercise): Heritage mapping

W4 (Exercise): identification of the heritage problem or diagnosis

W5 (Exercise): Critic session

### Unit 2\_Heritage Processes

W6 (lecture): Heritage Processes: Methodology, tools and outcome

W7 (lecture): Values report in different heritage categories

W8 (lecture): Implementing Historic Urban Landscape Recommendation

W9 (exercise): Identification of attributes and values heritage in Study area

W10 (exercise): Critic session

### Unit 3\_Intervention

W11 (lecture): Definition of criteria

W12 (lecture): Best Practices in sustainable heritage management

W14 (Exercise): intervention strategy / lines of action

W15 (Exercise): knowledge transfer

W13 (Exercise): Critic session

Making use of the following "Tools": documentary management, interpretation, graphic sources (photos, maps, films, among others)

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ **Demonstration of the syllabus coherence with the course objectives**

The student acquires an important ability in the study of cultural heritage in its multiple facets and dimensions, which fosters their critical capacity in relation to the identification of heritage values and attributes. The overcoming of the heritage object and the study of the context in which it is inserted, as well as its threats and opportunities, generates in the student an ability to relate the values and attributes of this heritage with the needs of the context, being able to identify the benefits and impacts generated in the urban context when using this heritage as a resource. Making this decision also enables him/her to define these intervention strategies in the aforementioned heritage.

### ▼ **Demonstration of the teaching methodologies coherence with the course objectives**

The materials provided to students in their learning process consist of an extensive bibliography according to the thematic contents mentioned, a wide range of case studies of heritage interventions (textual, graphic and photographic information), as well as films, videos, or press material that bring the student closer to different heritage areas. Students will usually work with historical images and historical cartography, as well as oral material collected from interviews with users of the heritage in question. This material is complemented by a study visit to a specific intervention or by attending a seminar or conference. The aim is to read these materials to become the basis for defining values based on the understanding and interpretation of the heritage problem on which the project is working. We will make recurrent use of the interpretation of texts and images as working tools to achieve sufficient knowledge of studies. The use of chronologies and interpretative cartographies will also form part of the learning outcomes.

Derived from this reality, different methods are promoted, which combine: Problem-Based Learning (PBL), Service Learning (SL), Cooperative Learning (CL), lectures / expository method, and case studies. This is the framework within which the learning of this programme is proposed, which is the result of combining different methodological strategies, each one is chosen according to the contents, teaching objectives and competencies to be developed. They are given various training activities, combining individual work with group work.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)  
3D modelling  
Physical modelling
- ▶ Case Studies  
Animation  
Simulation  
Rendering  
Other

## ASSESSMENT FORMATS

- Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper  
Essay
- ▶ Written Exam  
Oral Exam  
Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability, heritage and people and environment
2	Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, interview ....)
3	Key Challenges
4	Key Challenges
5	Practical skills 2
6	Pre examination activity / discussion assignment 1
7	Key framework and concepts
8	Key framework and concepts
9	Pre examination activity / case study
10	Key design strategies
11	Key design strategies
12	Practical skills 3
13	Pre examination activity / discussion case study
14	Case Study
15	Wrap-up lecture

## LITERATURE

GC1	1.1
	1.2
	1.3
GC2	2.1
	2.2
	2.3
GC3	3.1
	3.2
	3.3
GC4	4.1
	4.2
	4.3
GC5	5.1
	5.2
	5.3
GC6	6.1
	6.2
	6.3
GC7	7.1
	7.2
	7.3
GC8	8.1
	8.2
	8.3
GC9	9.1
	9.2
	9.3
GC10	10.1
	10.2
	10.3
GC11	11.1
	11.2
	11.3

**\*Index list provided in the Annex 1**

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prepared by Mar Loren-Méndez; Daniel  
Pinzón-Ayala; Roberto F. Alonso Jiménez

F202

**applied fundamentals**  
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# MODERN HERITAGE. CONCEPTUAL AND METHODOLOGICAL APPROACH

## COURSE ID CARD

semester	2
ECTS	6
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures  
Exercises  
OFL  
SRW  
Other

### COURSE TYPES

- Design Studio
- Intensive Workshop
- ▶ Theory Course
- ▶ Seminar
- Laboratory work
- Research Thesis
- ▶ Field Work
- Internship Practical training
- ▶ Other

### FORMS OF TEACHING

- Individual work
- ▶ Group work
- ▶ Supervision
- Master class

### Expected Prior Knowledge

The students should have overcome the Fundamentals course module offered in the first semester of the Master: its main contents and outcome: Contents: The complexity of the built heritage and the way of facing and dealing with it at all scales, taking into account: the notion of heritage and heritage genealogy – types and forms of heritage, values and attributes, forms and uses; heritage decay processes; understanding the relationship between heritage and sustainability; understanding vulnerability and risks related to the built heritage; aspects of heritage management. Outcome: students should know how to integrally approach the heritage and develop knowledge that enable them to perform the following methodological and practical steps on the built heritage: survey and identification of values and attributes, including pathology issues; characterization and documentation; valorization; designing strategies and actions; presentation of the built heritage; monitoring and maintenance; Students should have developed relevant skills, such as: context analysis tools; building heritage analysis tools (survey, mapping, documenting, cataloging, HBIM,...); heritage evaluation and assessment tools; Gained skills should enable students to perform relevant on-site analyses on the built heritage and to document and evaluate it properly.

### Courses objectives

1) To approach modern, modest and everyday heritage from its singularity and emerging character, understood in the stratified complexity of our built environment. 2) To consider this type of heritage from a multi-scale approach, which incorporates the scale of architecture, the city and the territory. 3) To qualify for historical analysis of such young heritage such as modern heritage: in view of its scarce historical trajectory (absence of history) we must overcome its low social appreciation and therefore its lack of institutional protection. 4) To train in methodologies capable of integrating rational knowledge with emotional and affective knowledge, thus incorporating the community as a key agent in heritage valuation. 5) To understand that all architectural heritage belongs to the present and therefore the need for direct and experiential knowledge (field work). 6) To promote local specificity in order to preserve cultural diversity and contribute to sustainability in a global scenario. 7) To integrate creativity with the methods considered scientific in heritage studies, making use of the tools and strategies of architecture.

### Course illustration.

*Contemporary appropriation of spaces in social housing. Plaza Amanecer, Polígono San Pablo (San Pablo Social Housing Quarter), Seville, Spain. Photography montage. Students: Manuel J. Cárdenas Domínguez, Celia Cumplido Rodríguez, Antonio Huertas Berro y Helena Ruano Herrera; Mar Loren Méndez, Professor 2018*



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural studies, cultural diversity
- Cultural identity
- Cultural enhancement
- Cultural heritage
- Heritage Genealogy

### HERITAGE TYPES

- Modern heritage
- Urban heritage
- Emerging heritage
- Tangible and Intangible

### DESIGN APPROACHES

- Multiscale design Approach
- Design for all in Cultural Heritage
- Historical Urban Landscape (HUL)

### DESIGN ACTIONS

- Public advocacy and social participation
- Conservation

### TOOLS

- Mapping, documenting and Cataloguing
- Creative & Artistic Approaches

## ☰ Course Syllabus

The theoretical lessons (TC\_) on modern heritage address the conceptualisation and historical contextualization, categorization, valuation and protection of heritage.

Practical lessons deal with application to local case studies. These are carried out in the Applied learning sessions (ApLC\_), which include both autonomous work sessions for students and short comprehensive seminars that provide tools to approach the practical case from training in documentary sources, methodological processes and formats. The learning dynamics of the practical part are carried out in groups of three to five students.

The five theoretical lessons (TC\_) take place in the first half of the semester.

The practical part is structured in The Applied learning sessions (ApLC\_) of the practical part are developed in two phases:

Applied Learning Class\_1: Identification, characterization, and historical and urban contextualization (ApLC\_1) in the first half of the semester.

Applied Learning Class\_2: Experiential, emotional knowledge. Urban itinerary (ApLC\_2), in the second one.

Both are structured in Sessions of autonomous student work, where the students can work with their teams, critical sessions and four Short Comprehensive Seminar (SCS\_) two supporting each of the phases.

Finally, the four Lectures series\_ Guest Agents (LS\_) are offered in the second half of the course: Lectures series\_1 Guest Agents (LS\_1): Community and participation; LS\_2: Public institution; LS\_3: Practitioner / Artist; LS\_4 Researcher / Creator.

The syllabus structure for this hybrid course is developed in detail below, in the 5. Course Structure.

### TEACHING METHODS

- Technical drawings
- Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- Design Project
- Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ► Demonstration of the syllabus coherence with the course objectives

This hybrid course offers the student the proper framework to train in the singularity and emerging character of the modern heritage. The chosen local case studies all belong to a specific city, so the students are able to work on a multi-scale approach, being able to relate the different scales of the architecture, the city and the territory. Regarding the key issues of qualifying for historical analysis and methodological training (integrating rational knowledge with emotional and affective knowledge) the students are learning by doing in the context of the Applied Learning Classes, together with a more specific training within the Seminars. The field work is at the same time facilitated through focusing on local case studies, and also supported in the Seminars. Finally, the course incorporates the importance of the community participation, even inviting experts in participatory methods.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

The core method is based on the problem-based learning, based on local case studies, combined with theoretical classes and seminars. Specifically, all the teams work on an architectural, urban heritage case study of a local city.

With a special emphasis on the relevance of integrating the methods established in the heritage studies, with the experiential / emotional knowledge, the teaching formats combine a research paper, with an itinerary and the graphical documentation complementing it.

Transversal methodological approach\_A) From the teaching to learning perspective: the course is rooted in the central role of the student, proposing a classroom strategy driven by intensive participation and based on a symmetrical dialogue student/teacher; B) Critical and autonomous development of the student; C) Integrity of heritage process: documentation and historical research, to values assessment and sustainable regeneration strategies.

## METHODOLOGY

### ASSESSMENT METHODS

Technical drawings  
Analytic drawings (diagrams)  
3D modelling  
Physical modelling  
► Case Studies  
Animation  
Simulation  
Rendering  
Other

### ASSESSMENT FORMATS

Design Project  
► Presentation  
► Technical report  
► Research paper  
Essay  
Written Exam  
Oral Exam  
Other

## ▼ COURSE STRUCTURE

1	W1_Presentation of the course. Organization of teams and choice of themes for works 1 and 2.Theory Class TC_1. Modern heritage. Conceptualization and terminology
2	W2_TC_2. Modern heritage as emergent heritage: types and singularities. Applied Learning Class_1: Identification, characterization, and historical and urban contextualization (ApLC_1) Introductory Session: Presentation of References
3	W3_ApLC_1. Short Comprehensive Seminar_1 (SCS_1): Documentary sources -Bibliographical, technical, cartographies, heritage and urban planning regulations, other graphical sources.ApLC_1 Session 1.1: Autonomous student work (in teams).
4	W4_ApLC_1 Session 1.2: Critical session: presentation the object of study and proposal of contents (all of the teams) TC_3. Modern heritage in the context of the World Heritage List and International Charts.
5	W5_ApLC_1. SCS_2: Methodology; ApLC_1Session 1.3: Autonomous student work (in teams).
6	W6_TC_4. Modern heritage in the local and regional context. Case studies;ApLC_1; Session 1.4.a: Critical session (Final presentation teams 1 and 2)
7	W7_TC_5. Heritage genealogies appearance and consolidation of the community within heritage; ApLC_1 Session 1.4.b: Critical session (Final presentation teams 3 and 4)
8	W8_ApLC_1. SCS_3: Formats; ApLC_1 Session 1.4.c: Critical session (Final presentation teams 5 and 6)
9	W9_ApLC_2: Experiential, emotional knowledge. Urban itinerary; Introductory Session: Presentation of References Lectures series_1 Guest Agents (LS_1): Community and participation
10	W10_ApLC_2 Session 2.1: Autonomous student work (in teams); ApLC_2 SCS_4: Experiential and emotional approaches. Participatory methods.
11	W11_ApLC_2 Session 2.2: Autonomous student work (in teams) LS_2: Public institution
12	W12_ApLC_2 Session 2.3: Presentation of the object of study and proposal of contents (all of the teams) LS_3: Practitioner / Artist
13	W13_ApLC_2 Session 2.4: Itinerary proposal LS_4 Researcher / Creator
14	W14_ApLC_2 Session 2.5: Final presentation.
15	W15_ApLC_2 Session 2.6: Field work. Itinerary execution.

≡ LITERATURE

GC1	1.1
	1.2
	1.3
GC2	2.1
	2.2
	2.3
GC3	3.1
	3.2
	3.3
GC4	4.1
	4.2
	4.3
GC5	5.1
	5.2
	5.3
GC6	6.1
	6.2
	6.3
GC7	7.1
	7.2
	7.3
GC8	8.1
	8.2
	8.3
GC9	9.1
	9.2
	9.3
GC10	10.1
	10.2
	10.3
GC11	11.1
	11.2
	11.3

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\*Index list provided in the Annex 1



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UNESCO Chair

USE

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prepared by Enrique Larive-López; José Peral-López

F302

**applied fundamentals**  
book of courses

# LINKING HERITAGE, SUSTAINABILITY AND TERRITORY

## COURSE ID CARD

semester	3
ECTS	9
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	5
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- ▶ Theory Course
- ▶ Seminar
- Laboratory work
- Research Thesis
- ▶ Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- ▶ Group work
- ▶ Supervision
- ▶ Master class

### Expected Prior Knowledge

This course builds on the knowledge acquired in previous semesters to help students develop a more dynamic understanding of heritage as a concept that links past, present and future through a territorial, interdisciplinary, sustainable and creative approach to the landscape project. In this context, the role of heritage in sustainable development is discussed, focusing on its possible use as a (re)generator of continuity or change, and is problematised in relation to various risks and challenges, as well as the needs and values of present and future societies. The course focuses on relating tangible and intangible heritage to social and ecological systems and processes to help students understand the complex and dynamic nature of heritage and recognise the main threats and opportunities, as well as the potential uses of heritage as a basis for sustainable urban and territorial development. The dynamics and complexity of built heritage would be taught with reference to key challenges such as: climate change; pandemic and health; conflict and social cohesion; globalisation, multiculturalism and digitalisation; urbanisation (expansion/reduction, density/intensity); social and environmental inequalities and justice. The purpose is to understand how they function as threats and/or opportunities for heritage in relation to sustainable development. An additional challenge would be to provide students with the opportunity to think about heritage and the built environment in relation to what they mean for elusive future societies, and how they can be used to improve the environment.

### Courses objectives

The following are proposed as priority cross-cutting themes for the architect's professional work: Theoretical and methodological knowledge that will enable them to understand and treat heritage as part of a constantly changing natural and social environment; the sustainability or sustainability (also social and cultural) of the proposals as a priority issue; interdisciplinary work, through the participation of collaborating professors from other areas of knowledge (geography, biology, sociology, engineering); the recovery of territorial logics and ecosystems as the beginning of the landscape project; and their social condition as processes of sustainable urban and territorial (re)generation in the face of emergencies and emerging phenomena. 1. Experimentation with transdisciplinary methodologies for landscape characterisation; 2. Relating culture and heritage as keys and vectors for sustainable urban and territorial development; 3. Creative and experimental approaches through the mapping of bibliographic and cartographic documentation, supports, quantitative and qualitative spatial data, agents and communities.

### Course illustration.

*+H2O. Water cartographies. (2008) M. V. Segura and Larive-López, E.*



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Resilience Cultural Heritage

### HERITAGE TYPES

- Cultural Landscape
- Tangible and Intangible Heritage

### DESIGN APPROACHES

- Heritage Reprogramming
- Environmentally Responsive Design
- Design for All in Cultural Heritage
- Green Blue Infrastructure
- Multiscale Design Approach

### DESIGN ACTIONS

- Temporary planning and Meanwhile
- Heritage Management
- Nature Based Solutions
- Developing Cultural Routes and Itineraries
- Adaptive Reuse

### TOOLS

- Morphogenesis Study
- Mapping, Documenting, Cataloguing
- Use of GIS Technology
- Collaborative Cartography
- Collaborative workshop - CHARRETTE
- Artistic approaches (photography, video, performance)

## ≡ Course Syllabus

The training activities therefore combine concrete knowledge of the territory with specific training in transdisciplinary methodologies for its sustainable (re)generation. It incorporates the contributions of expert contributors from both a content and methodological point of view.

1. On the one hand, the student is introduced to active methodologies of (re)knowledge of the landscape, its history, logics of transformation, singularity and heritage readings, from the scale of architecture, the city, infrastructures and the territory. 2. Territorial support in the definition of integral and sustainable strategies. Periods of occupation, permanence and logics of transformation: stratigraphic analysis and graphic synthesis of the intervention environments. 3. In contrast to an accumulative conception of the documentation found, the student is trained in the systematisation of this search, in its intentional and creative use, which must also incorporate the capacity to construct arguments and strategies around certain findings that stand out for a given student. 4. Space, time and action as a basis for the characterisation of an environment. The construction of a model as a process of place knowledge. 5. Heritage characterisation and cultural landscape. Supports and registers: creative cartographies and research dossier. 6. Territorial genome: tastings and test samples. Once the sites for the test samples have been identified, the singular characterisation of this territory is carried out through its tastings, which will include basic information to which each process will add relevant readings in its own process: fabrics, orthophoto, hydro, geolith, registers, uses, oblique, texture, journey, action; energies, looks, networks, overlaps, registers, connectors | speed, change, pentagram | contemporary, agri-culture, re-programming, pilgrimages, reprogrammed landscapes, intensive landscapes, border landscapes, parasite landscapes, homogeneous landscapes, bridge landscapes, interstice landscapes, archipelago landscapes, weft landscapes, development arcs. 7. Pentagrammatic readings. A temporal study of transformations and their results will be carried out. 8. The test tube. The student presents his/her singular characterisation of the intervention area. To do so, he/she will propose, from the process and methodology developed, his/her own system of creative characterisation, with textures and materials, the three dimensions and all that is necessary to construct the area of study as a space found, as an unveiled object in which to overturn the strategic findings. 9. The landscape as an operational heritage infrastructure. Materialities and manufactures; strategies and scales; inventory of possible spaces; imaginaries and daydreams. Models, collages and other supports. 10. Strategic design 1: Activated programmes. The construction of the project's argument, construction of information (annotated references, bibliographies, data, interviews). 11. Strategic design 2: The construction of the problem + network of agents + chronograms: diagrams and planimetries. 12. The active landscape atlas. An Atlas to understand, overlay, compare, measure and activate.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling  
Physical modelling
- ▶ Case Studies  
Animation
- ▶ Simulation  
Rendering  
Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- ▶ Presentation  
Technical report
- ▶ Research paper
- ▶ Essay  
Written Exam  
Oral Exam  
Other

### ▶ **Demonstration of the syllabus coherence with the course objectives**

Students will develop knowledge of research methods and techniques for managing change through architecture and urban and landscape design, as well as the methodological and practical steps for conducting analysis and researching alternative and future-oriented spatial interventions linking heritage and sustainability. They will acquire knowledge about the context, potential and logic of use of: a) specific mapping/analysis tools (GIS), b) tools for the development of environmental strategies (scenario planning, simulations, modelling), and c) specific tools for the evaluation/assessment of socio-environmental impacts and effects.

Linking theoretical and methodological knowledge with student-centred teaching and learning activities will help students to develop their critical and systemic thinking skills.

### ▼ **Demonstration of the teaching methodologies coherence with the course objectives**

The course will be delivered through lectures, seminars, on-site and site-specific analysis workshops using different approaches (exploratory, prescriptive, normative, comparative, creative)

The course will be accessed through group discussion, small assignments and individual written assignment.

The focus is on critical discussion, mutual support and feedback with students having the opportunity to direct their own learning by their engagement with suggested materials and exchange with others through shared insights, experiences and stories outside the classroom, to encourage awareness and reflection inspired by experiences of places/communities.

## METHODOLOGY

### ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- ▶ Simulation
- Rendering
- Other

### ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- Technical report
- ▶ Research paper
- ▶ Essay
- Written Exam
- Oral Exam
- Other

## COURSE STRUCTURE

1	Introduction lecture – linking sustainability, heritage and people and environment
2	Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, interview ....)
3	Key Challenges
4	Key Challenges
5	Practical skills 2
6	Pre examination activity / discussion assignment 1
7	Key framework and concepts
8	Key framework and concepts
9	Pre examination activity / case study
10	Key design strategies
11	Key design strategies
12	Practical skills 3
13	Pre examination activity / discussion case study
14	Case Study
15	Wrap-up lecture

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## LEARNING OUTCOMES

GC1	1.1
	1.2
	1.3
GC2	2.1
	2.2
	2.3
GC3	3.1
	3.2
	3.3
GC4	4.1
	4.2
	4.3
GC5	5.1
	5.2
	5.3
GC6	6.1
	6.2
	6.3
GC7	7.1
	7.2
	7.3
GC8	8.1
	8.2
	8.3
GC9	9.1
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	9.3
GC10	10.1
	10.2
	10.3
GC11	11.1
	11.2
	11.3

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# DESIGN STUDIO

Conservation and Restoration of Historic Buildings -  
Methodology and Practical Issues



Vernacular Architecture - Documentation and Design Intervention



Architectural Heritage Conservation



Re-Construct



Culture Sensitive Design



Energy Rehabilitation Of Heritage Buildings



Reusing Built Heritage:

Theories And Methodologies Of Reuse In Architectural Design



Creative Urban Reuse (Cur) Of Local Modern Heritage



Design For Flexibility



Enhancing Health And Wellbeing Aspects Of Heritage  
Through Architectural Design



Resilience And Future Heritage



Hybrids Products In Landscape: Operational And Accessible Infrastructures  
For Heritage And Sustainability



UCY

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prepared by Maria Philokyprou

S101

**design studio**

book of courses

# CONSERVATION AND RESTORATION OF HISTORIC BUILDINGS - METHODOLOGY AND PRACTICAL ISSUES

## COURSE ID CARD

semester	1
ECTS status	12/15 compulsory

### ACTIVE TEACHING CLASSES

Lectures	5
Exercises	5
OFL	10
SRW	
Other	

### COURSE TYPES

- ▶ Design Studio
- Intensive Workshop
- Theory Course
- Seminar
- Laboratory work
- Research Thesis
- ▶ Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- ▶ Group work
- Supervision
- Master class

### Expected Prior Knowledge

Eligible applicants are individuals who have basic knowledge for the documentation of historic buildings and approaches for their historic study

Creativity; technical knowledge on survey, communication, analytical, and visualization skills (integral protection approach)

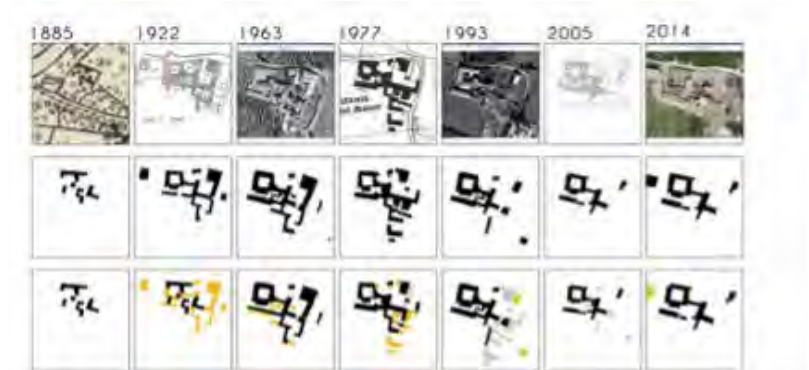
### Course objectives

The goal of the course is the comprehensive interdisciplinary training of students and their cooperation in real-life management issues of conservation that cultural heritage is currently facing.

The course aims to help students develop critical thinking and critical and interpretive approach and methodology, as well as to provide them with the practical experience and know-how in dealing with the protection and reuse of architectural units of other periods, through contemporary perceptions in the framework of current needs and challenges. At the same time, it aims at interdisciplinary cooperation between group members and at finding a common language of communication between interested parties in the conservation of cultural heritage.

More specifically, this course helps students acquire theoretical and practical knowledge in order to fulfil the current needs for documentation, analysis and design interventions on historic buildings in the private and public sector.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural heritage
- Cultural studies, Cultural diversity
- Cultural Identity
- Cultural Enhancement

### HERITAGE TYPES

- Architectural heritage (Industrial heritage, Modern heritage, Vernacular heritage)
- Monumental Heritage
- Documentary Heritage
- Heritage Sites

### DESIGN APPROACHES

- Multiscale design approach
- Design for all in Cultural heritage
- Environmentally Responsive Design
- Energy Conscious Design
- Passive/Active Sustainable Design

### DESIGN ACTIONS

- Adaptive reuse
- Preventive Conservation
- Integral Heritage Protection
- Conservation
- Restoration
- Consolidation
- Refurbishment/ Rehabilitation

### TOOLS

- Mapping, docu-menting, catalogu-ing
- Collaborative work-shop
- Digitalization of heritage
- As-Built / As-Found Recording

## ☰ Course Syllabus

The Capstone Design Project consists of three individual parts. Through this course a close collaboration is achieved between the different departments involved and their individual fields of specialization, as well as between the students who come from different academic disciplines.

In particular, this course gives students the opportunity to become trained and acquire the scientific knowledge required in their field, while familiarizing themselves with the tools and methods for conducting historical research, on-site design recording (using traditional and contemporary digital measuring instruments) and systematic data analysis.

Thus, students explore issues of digital recording and three-dimensional renderings. In addition, they gain knowledge on recording construction pathology by identifying damage and alterations to structures and building materials and elements, as well as on processing and evaluating field data. Students are also trained in the methodology of sampling and laboratory analysis of building materials. Finally, they become trained on formulating theoretical and design proposals for the conservation and reuse of historic buildings.

The Capstone Design Project is essentially a case study that combines analytical and design work and includes theoretical archival research and approach, field work (survey and design), laboratory experiments and design studio proposals.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- Presentation
- Technical report
- Research paper
- ▶ Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

- Development of an understanding of how heritage and sustainability matters for the community and the users through all the parts of the course and especially through the third part (design proposals for the restoration and reuse of the case study)
- Development of critical thinking, solid methodology, interpretive approach for the study of architecture of other eras.
- Exercise in the presentation of research findings.
- Collaboration with other sciences.
- Gaining practical experience and expertise in the maintenance and restoration of buildings or complexes.
- Development of the essential tools for design interventions and proposals for the restoration and reuse of existing structures.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

Teaching is carried out face to face, and only under special circumstances via teams, through lectures and presentations for the first 2-3 weeks, as well as visits to historic buildings with in-situ documentation in the case study, and laboratory experiments. The last part of the course involves design studio meetings with the students, presentation of their work and feedback by the teachers. Research in libraries and archives is also carried out in the first part of the project.

The most important aspect of the course is the historical analysis, documentation and design project carried out by the students. During the course students give presentations of their project.

Historical analysis and investigation through visits to the libraries and interviews etc (first part of the course)

Recording and documenting of the building (second part of the course): recording with the use of traditional and contemporary measuring instruments (laser meter, meter, etc.)

3D modelling of the building: photogrammetry software - photoscan, 3D modelling software.

Preparation of design work (third part) – proposals for the restoration and reuse of the case study

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)  
3D modelling  
Physical modelling
- ▶ Case Studies  
Animation  
Simulation
- ▶ Rendering  
Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation  
Technical report  
Research paper
- ▶ Essay  
Written Exam  
Oral Exam  
Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability and heritage
2	Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, visit to the case study)
3	Key Challenges – Methods of Historic analysis of the case study
4	Key Challenges – Methods of studying and selecting information - Visits to libraries, interviews etc
5	Practical skills 2 / Documentation of the case study
6	Pre examination activity / discussion assignment 1 – historical study and documentation of the case study
7	Key framework and concepts – Proposals for the restoration / pathology of the building
8	Key framework and concepts – adaptive reuse - Design and proposals for the use of the building
9	Pre-examination activity / case study – discussion and feedback for the proposal
10	Key design strategies – proposals for the restoration of the case study
11	Key design strategies – proposals for the reuse of the case study
12	Practical skills 3 – preparation of design drawings – plans, sections, renderings
13	Pre-examination activity / discussion of the case study proposal – written work and design
14	Case Study – presentation of the project for feedback
15	Final comments for the design work prepared

☰ LITERATURE

<b>GC1</b>	1.1
	1.2
	1.3
<b>GC2</b>	2.1
	2.2
	2.3
<b>GC3</b>	3.1
	3.2
	3.3
<b>GC4</b>	4.1
	4.2
	4.3
<b>GC5</b>	5.1
	5.2
	5.3
<b>GC6</b>	6.1
	6.2
	6.3
<b>GC7</b>	7.1
	7.2
	7.3
<b>GC8</b>	8.1
	8.2
	8.3
<b>GC9</b>	9.1
	9.2
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<b>GC10</b>	10.1
	10.2
	10.3
<b>GC11</b>	11.1
	11.2
	11.3

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S102

**design studio**

book of courses

# VERNACULAR ARCHITECTURE - DOCUMENTATION AND DESIGN INTERVENTION

## COURSE ID CARD

semester	1
ECTS	8
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures	3
Exercises	5
OFL	
SRW	
Other	

### COURSE TYPES

- ▶ Design Studio
- Intensive Workshop
- Theory Course
- Seminar
- Laboratory work
- Research Thesis
- ▶ Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- ▶ Group work
- Supervision
- Master class

### Expected Prior Knowledge

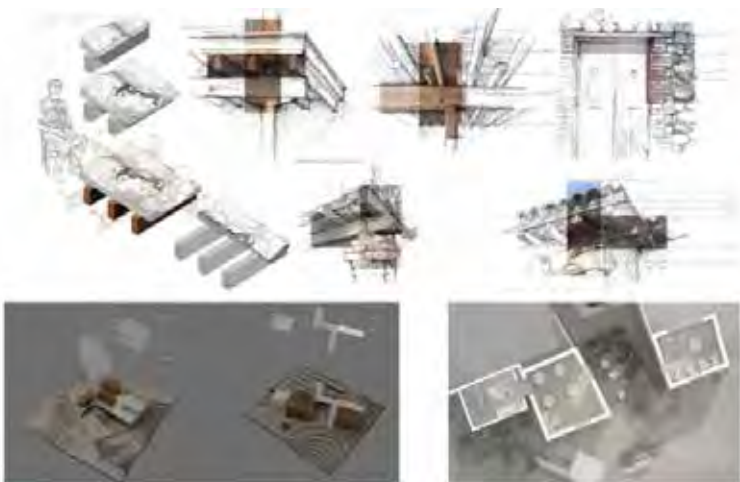
Eligible applicants are individuals who have basic knowledge for the documentation of vernacular settlements and dwellings and approaches for their study and documentation

Creativity; technical knowledge on survey, communication, analytical, and visualization skills (integral protection approach)

### Course objectives

- Development of the ability to recognize the architectural character of traditional settlements and their social content
- Development of methodological tools for the study and recognition of the physiognomy of the traditional settlements
- Development of methodology for the recognition of different values of a traditional place - intangible (spirit of a place) and tangible
- Training in issues of conservation and reuse of traditional buildings and settlements (main principles)
- Recognition of the basic pathology of traditional structures and development of methods of intervention in existing traditional complexes.
- Understanding of principles of overall protection of buildings and complexes
- Provision of knowledge for proper handling and action for the incorporation of new contemporary structures in sensitive traditional environments

### Course illustration.



Kallina Traditional Settlement, Team work: A. Chalijhondaridis, M. Patsis, A. Psarou, Afti jiri Vitrinada Architecture and Contemporary Issues

## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural heritage
- Cultural studies, Cultural diversity
- Cultural Identity
- Cultural Enhancement

### HERITAGE TYPES

- Architectural heritage (Vernacular heritage)
- Documentary Heritage
- Heritage Sites
- Vernacular architecture

### DESIGN APPROACHES

- Multiscale design approach
- Design for all in Cultural heritage
- Environmentally Responsive Design
- Energy Conscious Design
- Passive/Active Sustainable Design

### DESIGN ACTIONS

- Adaptive reuse
- Preventive Conservation
- Integral Heritage Protection
- Conservation
- Restoration
- Consolidation
- Refurbishment/ Rehabilitation

### TOOLS

- Mapping, documenting, cataloguing
- Collaborative workshop
- Digitalization of heritage
- As-Built / As-Found Recording

## ☰ Course Syllabus

The course includes analysis of rural traditional settlements (in different geomorphologies – on the coast, on the plains, on the mountains and in semi-mountainous regions) as well as urban settlements with reference to today's situation.

It is divided into two parts:

a) Documentation and analysis of all aspects (and values – tangible and intangible) of the traditional settlements (urban and building scale) and

b) Survey of a vernacular dwelling or complex and design proposal for rehabilitation with the incorporation of contemporary additions.

In the first part of the course an in-depth study takes place with regard to socio-economic development of a traditional settlement, urban layout (layout of streetscape, public open spaces, private domestic dwellings, public buildings), typology, morphology and construction of vernacular houses and the social, economic and climatic elements of the area which influence the various forms and structural systems followed. At the same time comparisons and interrelations with the traditional architecture of neighbouring areas and countries are being examined. Basic bioclimatic design principles of the traditional architecture are also being analysed.

The second part of the course deals with the theory and contemporary trends in conservation and reuse of traditional buildings, the basic pathology of constructions, the most common techniques for conservation, the protection and the design and incorporation of new uses in buildings and complexes. All the above are based on the general principles and methodology of a holistic protection of buildings.

Finally, the basic principles of design intervention - incorporating new buildings in existing traditional complexes are being analysed. This second part includes design studio work – proposals for the rearrangement and reuse of traditional dwellings and complexes as well as additions of new contemporary structures in traditional environments in order to fulfill today's needs of the inhabitants.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- Presentation
- Technical report
- Research paper
- ▶ Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

- Comprehensive interdisciplinary training and cooperation in real-life management issues of environmentally sustainable conservation that traditional settlements and vernacular dwellings are currently facing.
- Development of critical thinking and critical and interpretive approach and methodology in dealing with the protection and reuse of traditional settlements, through contemporary perceptions in the framework of current needs and challenges which constitutes a sustainable approach towards the existing build environment.

More specifically, this course helps students acquire theoretical and practical knowledge in order to fulfil the current needs for documentation, analysis and design interventions on traditional settlements and vernacular dwellings, an objective very closely related with the notion of sustainability and heritage.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

Teaching is carried out through lectures as well as through presentations and meetings for the projects. During the semester brief students' presentations of the two phases of the projects take place. Visits are also organised to traditional settlements for the better understanding of the various themes which are being analysed during the semester. The second part of the course involves design studio meetings with the students, presentation of their work and feedback by the teachers.

During the semester students are divided into groups and each group selects a traditional settlement that preserves its authentic character. An analysis of the various aspects of the settlement – urban layout, typology of the dwellings, morphology of the whole and of the individual dwellings, structural methods and materiality is undertaken. Special care is given to the special characteristics and today's problems which are related to the settlements under study.

In the second phase of the project, a vernacular building or a small complex of dwellings which needs conservation is being selected. This is surveyed, photographed and analysed (using traditional tools and methods) in detail for investigating its pathology. At the same time a scenario is proposed regarding the reuse of the building. For this purpose, new structures are being designed which are incorporated in the traditional settlement. The reuse of the existing building and the new additions should be related with a general program of the traditional settlement rehabilitation.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)  
3D modelling  
Physical modelling
- ▶ Case Studies  
Animation  
Simulation
- ▶ Rendering  
Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation  
Technical report  
Research paper
- ▶ Essay  
Written Exam  
Oral Exam  
Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability and vernacular architecture – notions
2	Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, visit to traditional settlements)
3	Key Challenges – Methods of analysis of traditional settlements
4	Key Challenges – Methods of analysis of vernacular dwellings
5	Practical skills 2 / Documentation of the traditional settlement
6	Pre examination activity / discussion assignment 1 – in situ study and documentation of the traditional settlement
7	Key framework and concepts – documentation of a vernacular dwelling / pathology of the building
8	Key framework and concepts – adaptive reuse - Design and proposals for the use of a vernacular dwelling
9	Pre-examination activity / case study – discussion and feedback for the proposal
10	Key design strategies – proposals for the restoration of the vernacular dwelling
11	Key design strategies – proposals for new interventions and additions to the vernacular dwelling
12	Practical skills 3 – preparation of design drawings – plans, sections, renderings of the vernacular dwelling
13	Pre-examination activity / discussion of the case study proposal – written work and design
14	Case Study – presentation of the project for feedback
15	Final comments for the design work prepared

≡ LITERATURE

GC1	1.1
	1.2
	1.3
GC2	2.1
	2.2
	2.3
GC3	3.1
	3.2
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GC4	4.1
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GC5	5.1
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GC6	6.1
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GC7	7.1
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	8.2
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GC9	9.1
	9.2
	9.3
GC10	10.1
	10.2
	10.3
GC11	11.1
	11.2
	11.3

\*Index list provided in the Annex 1

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prepared by Emanuela Sorbo

S103

**design studio**

book of courses

# ARCHITECTURAL HERITAGE CONSERVATION

## COURSE ID CARD

sem.	1
ECTS	15(12+3)
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	5

### COURSE TYPES

- ▶ Design Studio
- ▶ Intensive Workshop
- ▶ Theory Course Seminar
- ▶ Laboratory work Research Thesis
- ▶ Field Work

### FORMS OF TEACHING

- ▶ Individual work
- ▶ Group work Supervision
- ▶ Master class

### Expected Prior Knowledge

Basic knowledge gained during the architecture-related bachelor studies, such as basic architectural and urban design comprehension and history of architecture.

### Course objectives

The primary training objective is to acquire knowledge and skills in methods of analysis and design of the architectural heritage that are able to interface across different horizons:

- mastery of the protection orientations, included in a historical-critical perspective from the end of the 19th century to the recent regulations referring to the International charters;
  - understanding, evaluation and analysis of the building in the connections between historical stratifications and material traces as a preliminary basis for the project;
  - conservation and restoration strategies characterised in a contemporary normative, cultural and theoretical horizon within the frame of the «Faro Convention»;
  - elaboration of project outlines responding to the recognised cultural values of the architectural heritage, ensuring its conservation and architectural quality through formal, technological, structural and functional solutions in the perspective of sustainability;
- Particular attention will be paid to the interpretative and material-constructive reading of architecture with the aim of developing the student's autonomy of judgement in the evaluation of the state of conservation and in project outlines. The student will be led towards a mature ability to represent the historical-critical investigation and the project through works conceived within a normative horizon. The preparation thus acquired will provide the student with the tools to develop autonomously in the course of study and in future professional activity the operational horizons of the restoration world.

### Course illustration.

Educational model diagram by the authors.



## RELATION TO IO3 STATEMENTS

### ≡ Course Syllabus

#### NOTIONS

- Cultural Heritage
- Cultural and Collective Memory
- Cultural Identity
- Cultural Enhancement

#### HERITAGE TYPES

- Tangible and Intangible Heritage
- Industrial Heritage
- Monumental Heritage
- Archaeological heritage

#### DESIGN APPROACHES

- Design for all
- Design for Cultural Heritage
- Multiscale Design Approach

#### DESIGN ACTIONS

- Conservation
- Restoration
- Consolidation
- Temporary planning and mean while space
- Public Advocacy for Social
- Participation

#### TOOLS

- Photogrammetry
- Image Rectificatio
- Collaborative cartography
- Conservation Status Evaluation

The course will consist of a critical theoretical component and an operational component.

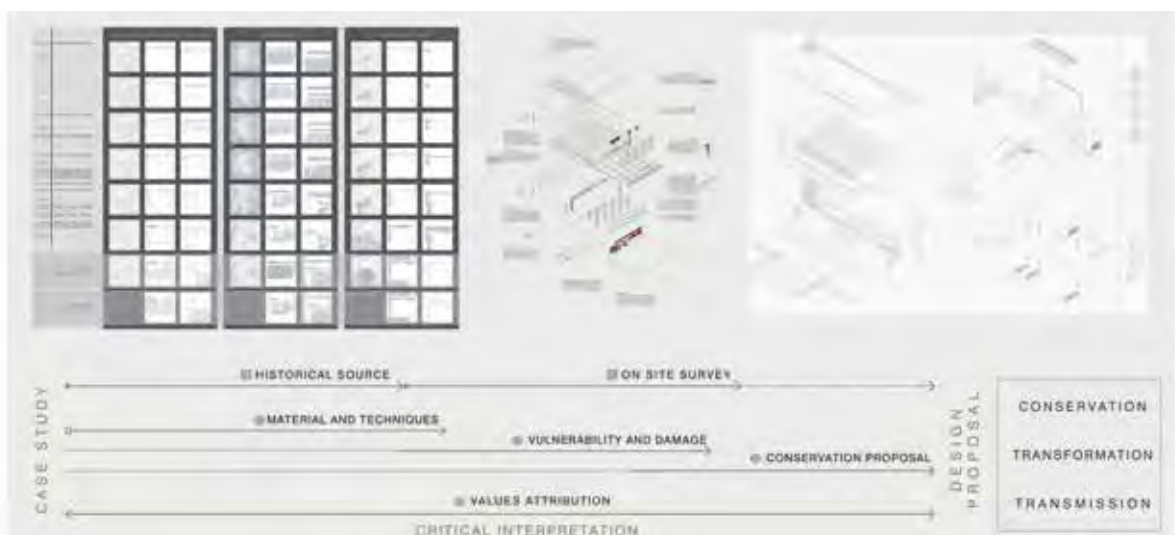
The theoretical part will focus on the relationship between preservation, conservation and cultural vision through norms and case studies such as:

- the debate within International Charters with respect of the theme of «reconstruction» and «sustainability».
- the debate within International Charters with respect of the theme of «authenticity» and «cultural memories and identities».

The operational part is manly focused on an abandoned cultural heritage. Subject of the exercise part will be the analysis, the methodologies for evaluating the state of conservation and the project outlines of an existing architecture in a particular condition of degradation and abandonment. The applied case study proposed will be discussed with the local stakeholders. The course suggests the identification of a multidisciplinary experimental approach that includes reflections on relevant social, scientific, or ethical issues in respect of the engagement of the communities as a key factor for sustainable urban development.

Fig. 2. Educational model application at the Master course in Architettura per il Nuovo e per l'Antico:

- Spazi flessibili. Tavola di interpretazione storico critica (Historical critical interpretation board). by Giorgia Boso, Viola Gregorini  
 - REDIVIVO. Conoscenza della fabbrica. Analisi costruttiva di rilievo. (Building knowledge. Survey construction analysis). by Eleonora Frison, Erika Martignon;  
 - Innesti di progetto. Conoscenza della fabbrica. Analisi costruttiva di progetto (Building knowledge. Design construction analysis). by Iacopo Baldelli, Irene Sionato.  
 Institutional cooperation between University IUAV of Venice; Municipality of Vicenza; Architectural and landscape heritage Superintendency of Verona, Rovigo and Vicenza; Istituto Italiano dei Castelli; Ordine degli architetti, pianificatori, paesaggisti e conservatori della provincia di Vicenza; Fondazione Coppola; Fondazione Vajenti. Final Exhibition Results "Vicenza | Visions ongoing - Strategie per i luoghi culturali nei percorsi formativi Iuav" - 2019. (Iuav scientific coordinator Emanuela Sorbo - exhibition curated by Margherita Possamai, Sofia Zanotto, Teresa Busetto. Final Video: <https://www.youtube.com/watch?v=68Edy7AydQQ>)



### TEACHING METHODS

- ▶ Technical drawings  
Analytic drawings  
(diagrams)
- ▶ 3D modelling  
Physical modelling
- ▶ Case Studies  
Animation  
Simulation  
Rendering  
Specific international  
bibliography

### TEACHING FORMATS

- ▶ Design Project  
Presentation
- ▶ Technical report  
Research paper  
Essay  
Written Exam  
Oral Exam  
Other

### ▶ Demonstration of the syllabus coherence with the course objectives

The main educational goal of the Design Studio is to achieve students' critical awareness and analytical and planning tools necessary to manage the complexity of architectural heritage. The students will develop the attitude to deal with an autonomous and critical approach to the themes of conservation and restoration projects, via theoretical and operative educational path.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

The Course includes:

- \_ Ex-cathedra introductory lectures.
- \_ Laboratory-type revision activities.
- \_ Workshop sessions.
- \_ Seminars with invited lecturers.
- \_ Surveys on site.

In the Design Studio Course, students will acquire a methodology of study and analysis for Cultural Heritage within a critical approach to the design context, verifying their design choices during the reviews.

## ASSESSMENT METHODS

- ▶ Technical drawings  
Analytic drawings (diagrams)
- ▶ 3D modelling  
Physical modelling
- ▶ Case Studies  
Animation  
Simulation  
Rendering  
Other

## ASSESSMENT FORMATS

- ▶ Design Project  
Presentation
- ▶ Technical report  
Research paper  
Essay  
Written Exam
- ▶ Oral Exam  
Other

## ▼ COURSE STRUCTURE

1	<b>Introduction lecture</b> / Linking sustainability, heritage, people and environment - Course Introduction and Overview - Case Study presentation - Expected learning outcomes presentation - Survey and Contacts
2	<b>Key framework and concepts 1</b>
3	<b>Practical skills 1</b> / Case study and data collections
4	<b>Key Challenges 1</b> / Architectural elements abacus
5	<b>Pre examination activity / discussion assignment 1</b> / Demonstration of architectural knowledge and critical analysis of historical stratification
6	<b>Key framework and concepts 2</b> / Status Evaluation
7	<b>Practical skills 2</b> / Case study and data collections
8	<b>Key Challenges 2</b> / Architectural Evaluation
9	<b>Pre examination activity 2 / discussion assignment 2</b> / Demonstration of technical conservative architectural evaluation
10	<b>Key framework and concepts 3</b> / Seminars with invited lecturers and discussion assignments on the protection orientations (from the end of the 19th century to the recent regulations referring to the international charters)
11	<b>Key design strategies 3</b> / didentites
12	<b>Key framework and concepts 3</b>
13	<b>Key Challenges 3</b> / Elaboration of project outlines responding to the recognised cultural values of the architectural heritage
14	<b>Pre examination activity 3</b>
15	<b>Wrap-up lecture</b> / Seminars with invited lecturers and discussion assignments

<b>GC1</b>	1.1
	1.2
<b>GC2</b>	1.3
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	2.2
<b>GC3</b>	2.3
	3.1
	3.2
<b>GC4</b>	3.3
	4.1
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<b>GC5</b>	4.3
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<b>GC8</b>	7.3
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<b>GC9</b>	8.3
	9.1
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<b>GC10</b>	9.3
	10.1
	10.2
<b>GC11</b>	10.3
	11.1
	11.2
	11.3

**\*Index list provided in the Annex 1**

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Sofoklis Kotsopoulos

S104

**design studio**

book of courses

# RE-CONSTRUCT

## COURSE ID CARD

semes- ter	1
ECTS status	15 (12+3) compulsory

### ACTIVE TEACHING CLASSES

Lectures	3
Exercises	12
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- Theory Course
- Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- Individual work
- Group work
- Supervision
- Master class

### Expected Prior Knowledge

It is beneficial that students are familiar with the following notions, design approaches, actions and tools: Restoration/ Rehabilitation, Regeneration • Fundamental concepts related to the notion of heritage • Heritage genealogy • Heritage Decay • Understanding relationships between heritage and sustainability.

### Course objectives

Aim of the course is to bring students in contact with the Theory of Material Culture and the critical treatment of the built urban heritage, from a conservation and environmental design approach. Students will be introduced and acquire methods and tools for the interpretation and evaluation of urban heritage, as it is recorded in historic buildings and sites. The aim is also to acquaint future architects with the issues of restoration and reuse of historic buildings and ensembles, in order to act with appropriate methods and practices, while underlying sustainable dimensions of conservation. The studio course will seek to enhance the ability of students to observe, analyze and understand the historical, aesthetic and constructional values of historic buildings and sites obtained through the recording, systematic architectural and urban design analysis and documentation of typologies, construction systems and forms.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural Heritage
- Heritage Genealogy

### HERITAGE TYPES

- Vernacular Heritage
- Modern Heritage
- Heritage sites

### DESIGN APPROACHES

- Heritage  
Reprogramming
- Historical Urban  
Landscape

### DESIGN ACTIONS

- Integral Heritage  
Protection
- Restoration
- Rehabilitation  
Strategies

### TOOLS

- As-Built / As-Found  
Recording
- Mapping, Documenting  
and Cataloguing

## ☰ Course Syllabus

The course will inform and educate future architects in order to read and recognize the historical built environment, through a systematic survey and analysis in order to be able to formulate strategies and design proposals for their conservation and sustainable management. The course combines theory with the development of a design project, labs/exercises and a written essay.

Students will be asked to address the theoretical and methodological issues of analysis, documentation and assessment for interventions of conservation and reuse of historic sites and structures. Such issues require a systematic and interdisciplinary analysis regarding the historical, cultural, social, environmental and aesthetic values which monuments and sites represent. The complexity that characterizes this architectural practice makes it necessary to adopt methods that combine various levels of analysis and encompassing contemporary theory of conservation and restoration.

Students are invited to work in groups, to analyze and evaluate a selected small-scale historic ensemble (urban block, historic streetscape etc), in order to study and assess its current condition and to formulate strategies for its conservation and reuse, in accordance with contemporary theory and practice.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- Presentation
- Technical report
- Research paper
- ▶ Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

The course forms the basis of studies in the subjects of heritage and sustainability. Through this, the analytical approach to the physical object and the deep understanding of its particularities are taught in practice. Through the documentation of architectural heritage, its historical, aesthetic, artistic and environmental values are perceived, allowing the understanding of parameters concerning its reintegration into the contemporary context. In relation to the relevant studio courses of the following semesters, those of Re-use (which deals with today - social dimensions) and Re-silence (which deals with tomorrow), the main focus of Re-construct is the heritage values of yesterday, which are impossible to manage without a comprehensive understanding of underlying principles.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

Lectures and individual or group tutoring during studio, field work and site visits.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)  
3D modelling  
Physical modelling
- ▶ Case Studies  
Animation  
Simulation
- ▶ Rendering  
Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation  
Technical report  
Research paper
- ▶ Essay  
Written Exam  
Oral Exam  
Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability and vernacular architecture – notions
2	Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, visit to traditional settlements)
3	Key Challenges – Methods of analysis of traditional settlements
4	Key Challenges – Methods of analysis of vernacular dwellings
5	Practical skills 2 / Documentation of the traditional settlement
6	Pre examination activity / discussion assignment 1 – in situ study and documentation of the traditional settlement
7	Key framework and concepts – documentation of a vernacular dwelling / pathology of the building
8	Key framework and concepts – adaptive reuse - Design and proposals for the use of a vernacular dwelling
9	Pre-examination activity / case study – discussion and feedback for the proposal
10	Key design strategies – proposals for the restoration of the vernacular dwelling
11	Key design strategies – proposals for new interventions and additions to the vernacular dwelling
12	Practical skills 3 – preparation of design drawings – plans, sections, renderings of the vernacular dwelling
13	Pre-examination activity / discussion of the case study proposal – written work and design
14	Case Study – presentation of the project for feedback
15	Final comments for the design work prepared

GC1	1.1
	1.2
	1.3
GC2	2.1
	2.2
	2.3
GC3	3.1
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GC8	8.1
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GC10	10.1
	10.2
	10.3
GC11	11.1
	11.2
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**\*Index list provided in the Annex 1**

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prepared by Milica Milojević

S201

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book of courses

# CULTURE SENSITIVE DESIGN

## COURSE ID CARD

semester	1
ECTS	12 (9+3) /15 (3+9+3)
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures	15
Exercises	
OFL	
SRW	
Other	

### COURSE TYPES

- ▶ Design Studio
- ▶ Intensive Workshop
- Theory Course
- Seminar
- Laboratory work
- Research Thesis
- ▶ Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- Individual work
- ▶ Group work
- ▶ Supervision
- Master class

### Expected Prior Knowledge

Eligible applicants are individuals who have completed previous courses that are foreseen in the study program.

Creativity; technical, organizational, communication, analytical, and visualization skills (integral protection approach)

### Course objectives

- To recognize and understand how heritage and sustainability matters for local community in the process of anticipating transformation of the built environment.

- To improve visual culture and develop practical skills for identification and interpretation of specificities of contemporary (everyday) urban context and reflection on spatial transformations and changes - from cultural landscape to isolate small settlements.

- To encourage divergent thinking on revitalization of heritage sites through designing new spaces and programming adaptive reuse of present heritage.

### Course illustration.

Senjski rudnik exhibition.

Photo credits: Milica Milojević



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Urban patterns
- Cultural heritage
- Cultural identity
- Urban narratives
- Cultural studies, Cultural diversity

### HERITAGE TYPES

- Urban heritage
- Architectural heritage (Industrial heritage, Modern heritage, Vernacular heritage)
- Cultural landscape
- Natural heritage

### DESIGN APPROACHES

- Heritage reprogramming
- Community building and representation
- Multiscale design approach
- Historical urban landscape
- Design for all in Cultural heritage
- Passive/active sustainable design

### DESIGN ACTIONS

- Adaptive reuse
- Redevelopment
- Public advocacy for social participation
- Development cultural routes and itineraries

### TOOLS

- Morphogenesis study
- Mapping, documenting, cataloguing
- Collaborative cartography
- Collaborative workshop
- Heritage value matrix
- Digitalization of heritage

## ☰ Course Syllabus

First part of the course is in the form of Fieldtrip (Workshop) within which students gain insight into local values of the built environment and urban heritage. Through site-survey and fieldwork, students are becoming aware of attitudes, customs and habits of the local population through work on a specific spatial polygon, while in communication and cooperation with local and external experts they problematize the present use of heritage. Research and analysis of theoretical sources, current expert studies and planning documents, provide students with relevant information needed for understanding of the context. This part is initial step of data base collection that will be used in further steps of design process.

Central part of the course is in the form of Design Studio and consists of individual work on design tasks through several steps - conceptualization of spatial and programme solution, design elaboration, critical self-evaluation of the design based on principles of sustainability and heritage awareness and project presentation through drawings, 3D models, perspective views, textual explanations etc.

Final part of the course is in the form of Exhibition (Workshop) through which students are challenged to communicate and share individual research and design solutions to local community and wider public. The student develops techniques for presenting architectural ideas of revitalization and re-identification of people with the existing and new values of the place.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- ▶ Presentation
- Technical report
- ▶ Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

Students recognize and understand how heritage and sustainability matters for local community through the first part of the course on site work and later on in the final part of the course through exhibition activities. Place-based research and spatial interventions are encouraged in relation to community values and thematic framework. Improvement of visual culture and development of practical skills for identification and interpretation of specificities of contemporary context is achieved in all three parts of the course and it is reconfirmed on final exhibition. Diverse topics and variety of re-use solutions are derived by conflicting of multiple perspectives and individual sensibilities in order to encourage divergent thinking on revitalization of heritage sites.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

The research part and workshops are based on Community building and representation approach (field work on a specific spatial polygon with local people and experts involved in workshop at the beginning of semester as well as exhibition activities organized at the end of the course are organized with the aim to improve visual culture and mutual understanding of heritage values).

Design activities are based on Heritage reprogramming, Urban morphology and Multi-scale approach (intervention proposals and design solutions based on urban morphology and multi-scale approach, adaptive reuse and soft design strategies support divergent thinking on revitalization of heritage sites). Studio methodology comprises in joint work in the studio through a combination of lectures and interactive forms of teaching and discussions on individual research projects and design proposals.

During the elaboration of the design projects students develop techniques for identification, presentation and elaboration of ideas through presentations and debates in the Studio and on the site.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- Case Studies
- Animation
- Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- Technical report
- ▶ Research paper
- Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking (HER-SUS) heritage and people through design
2	Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, interview ....)
3	Key Challenges – identification of patterns (urban patterns, patterns of use, behavioral patterns)
4	Key Challenges – contemporary everyday urban context
5	Practical skills 2 – visual and spatial representation of cultural specificit
6	Pre examination activity / discussion assignment 1 (problematization and thematization of use and present heritage val-ue for people)
7	Key framework and concepts of (re-programming vs people)
8	Key framework and concepts (re-programming vs place/design for all)
9	Pre examination activity / case study (examples of good practice)
10	Key design strategies (spatial intervention and interpretation of programme)
11	Key design strategies (adaptive re-use and SUS-principles)
12	Practical skills 3 – architectural representation of change
13	Pre examination activity / discussion programme and adaptation solutions through HER-SUS evaluating frame
14	Research paper draft – topic, key words (Catchwords) and structure
15	Wrap-up lecture

GC1	1.1
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GC2	2.1
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GC3	3.1
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GC10	10.1
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GC11	11.1
	11.2
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**\*Index list provided in the Annex 1**

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UBFA

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prepared by Bojana Zeković

S202

**design studio**

book of courses

# ENERGY REHABILITATION OF HERITAGE BUILDINGS

## COURSE ID CARD

semester	3
ECTS	15
status	elective

### ACTIVE TEACHING CLASSES

Lectures	
Exercises	
OFL	15
SRW	
Other	

### COURSE TYPES

- ▶ Design Studio
- ▶ Intensive Workshop
- Theory Course
- Seminar
- Laboratory work
- Research Thesis
- ▶ Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- ▶ Group work
- ▶ Supervision
- Master class

### Expected Prior Knowledge

The course is compulsory. To be eligible for admission to this course, students should have finished DESIGN STUDIO 1 and 2. Necessary skills include drawing (CAD) and modelling skills (3D), physical model making, design thinking.

### Courses objectives

The novel impetus for enhancing energy rehabilitation of existing buildings, coming from the European renovation wave declaration has only proved that the track of refurbishment of existing buildings is the secure track for achieving sustainable and resilient built environment. Creative approach to refurbishment of heritage buildings can be achieved only through design that cultivates knowledge about evolving human needs, heritage notions and contemporary issues of energy and material flows, seeking design opportunities where conservative or prescriptive approach would see limitations. Thus, this course general objective is to deal with deep refurbishment of an existing building of a particular architectural heritage type, through a combination of design studio approach, a seminar and a workshop.

More specifically, the objectives are to encourage creative design thinking in the early phases of the project development, enhanced by the examination of the existing state of the buildings and their historical and technological background, acknowledging their value as heritage buildings. Following the formulation of the design concepts, the project is developed to the detail materialization level, supported by the assessment of energy performance.

### Course illustration.

*Building Jugoslovenska Kinoteka, arch. Pavle Vasev, photo Aleksandra Đorđević*



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Sustainability
- Resilience

### HERITAGE TYPES

- Urban heritage
- Architectural heritage  
(Industrial heritage, Modern heritage, Vernacular heritage)

### DESIGN APPROACHES

- Environmentally responsive Design
- Energy conscious Design
- Climate sensitive Design
- Passive/Active Sustainable Design
- Thermal Comfort Design

### DESIGN ACTIONS

- Refurbishment/  
Rehabilitation
- Redevelopment
- Nature Based Solutions
- Adaptive reuse
- Microclimate Improvement

### TOOLS

- Drawing, modelling
- Mapping, Document.,  
Cataloguing
- Energy Performance  
Calculations and Simulation

## ≡ Course Syllabus

The beginning of the course is dedicated to research and familiarization with the heritage object (building or complex of buildings) that becomes the object of intervention during the course. Not only physical properties of the building, like the structure and materialization are investigated in detail, but also the context in which it was erected, its history and current state, as well as possible scenarios for its further development and integration into wider context. From these analyses the concept for project development is drafted.

Further work on the project development takes form of a Design Studio, organized as individual and/or team work, depending on the scope of developed concepts. Where the concept is such that it encompasses a large-scale intervention, teams will be formed in a way that each individual have a defined segment which can be further detailed. Project development follow the phases of conceptualization of programme and its spatial distribution, concretization of formal design, elaboration of structural and technological solutions, critical evaluation of issues of achieving sustainable and efficient use and relation to heritage. Work on design development is in the form of drawings, 3D models, physical models, case studies, bioclimatic analyses, diagrams and simulations.

Work on the design studio is followed by a seminar that is aimed at providing students with the insight in the tools that can help them evaluate the design solutions in terms of achieved sustainability and resilience (energy consumption calculations, dynamic thermal modelling, LCA analysis etc.). The aim of the seminar is to inform and encourage the critical self-evaluation of the projects during their development. At the end of the project development phase, before the final detailing and work on the project presentation, a workshop is aimed at applying one of the analysis tools that students got familiar with during the seminar on the analysis of their project proposals.

Final part of the course is the exhibition and student presentation of their projects. Students are challenged to present their project in a comprehensive, yet concise way, highlighting the advantages and persuading the mentors and wider public in the superior qualities achieved by their project proposals.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- ▶ Written Exam
- ▶ Oral Exam
- ▶ Other

### ▶ **Demonstration of the syllabus coherence with the course objectives**

In the first part of the course students are examining the selected heritage building from different perspectives, in order to infuse the design process with multiple layers of knowledge about the object of intervention, highlighting the creative design thinking in the deep refurbishment process. Also, following the seminar dealing with tools for sustainability assessment parallel with the work on project development, students are critically re-examining their design decisions, incorporating specific knowledge about sustainability and resilience issues in the early phases of design development. The workshop in which the developed projects are assessed based on various sustainability and resilience criteria with the use of selected tools is using the level of detail design to further highlight achievements in terms of energy efficiency and sustainable heritage treatment.

### ▼ **Demonstration of the teaching methodologies coherence with the course objectives**

Design studio activities are based on the project-oriented and deep learning. Seminar that follows design studio encourages these approaches through incorporating new kinds of knowledge in the design process. Workshop activities enable students to immediately use the gained knowledge, involving active learning to critically evaluate their design solutions and improve them in order to better respond to environmental issues.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings  
Analytic drawings (diagrams)
- ▶ 3D modelling  
Physical modelling  
Case Studies  
Animation  
Simulation  
Rendering  
Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation  
Technical report  
Research paper  
Essay  
Written Exam  
Oral Exam  
Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability, heritage and deep refurbishment
2	Object building analysis: site visit, historical/ architectural background, technological and material characteristic analysis
3	Re-programming: analysis of development potentials, development of programme schemes
4	Project development – Conceptualization of program distribution
5	Project development – Conceptualization of formal qualities
6	Project development – re-evaluation of formal/ functional/technological concept / Seminar on sustainability assessment
7	Project development – re-evaluation of formal/ functional/technological concept / Seminar on sustainability assessment
8	Project development – re-evaluation of formal/ functional/technological concept / Seminar on sustainability assessment
9	Project development – wrapping up the idea design level
10	Pre examination activity / project development – idea design level brief
11	Project elaboration – detailing, material and technological solutions development
12	Project elaboration – detailing, material and technological solutions development
13	Workshop – sustainability assessment tools
14	Workshop – sustainability assessment tools
15	Final exam – exhibition, presentation and discussion

<b>GC1</b>	1.1
	1.2
	1.3
<b>GC2</b>	2.1
	2.2
	2.3
<b>GC3</b>	3.1
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<b>GC4</b>	4.1
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<b>GC5</b>	5.1
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<b>GC6</b>	6.1
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<b>GC8</b>	8.1
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<b>GC9</b>	9.1
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	9.3
<b>GC10</b>	10.1
	10.2
	10.3
<b>GC11</b>	11.1
	11.2
	11.3

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Università Iuav  
di Venezia

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prepared by Mauro Marzo (Iuav),  
Viola Bertini (Sapienza Università di Roma)

S203  
**design studio**  
book of courses

# REUSING BUILT HERITAGE: THEORIES AND METHODOLOGIES OF REUSE IN ARCHITECTURAL DESIGN

## COURSE ID CARD

semester	2
ECTS	15
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures	8
Exercises	7
OFL	
SRW	
Other	

### COURSE TYPES

- ▶ Design Studio
- ▶ Intensive Workshop
- ▶ Theory Course
- ▶ Seminar
- ▶ Laboratory work
- ▶ Research Thesis
- ▶ Field Work
- ▶ Internship Practical training
- ▶ Other

### FORMS OF TEACHING

- ▶ Individual work
- ▶ Group work
- ▶ Supervision
- ▶ Master class

### Expected Prior Knowledge

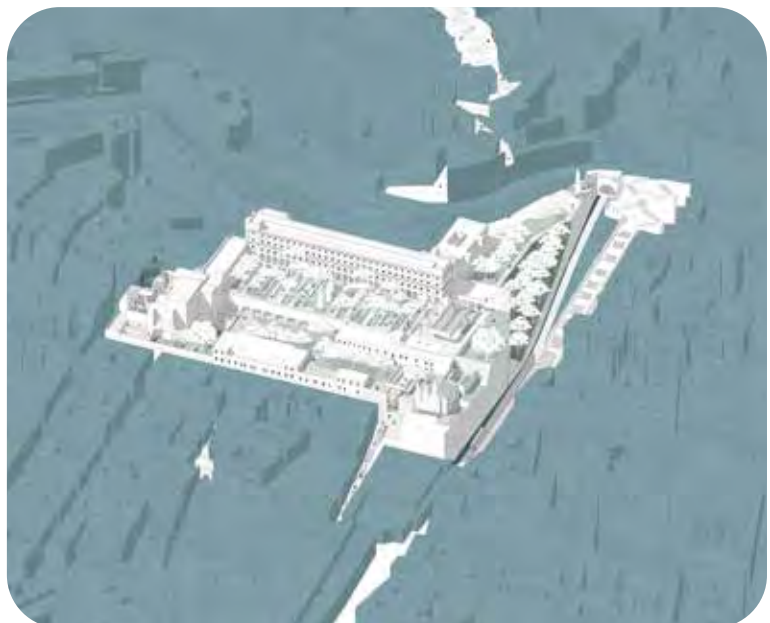
The course is compulsory. To be eligible for admission to this course, students should have finished DESIGN STUDIO 1

### Courses objectives

The construction of a framework of knowledge, skills, and methodologies useful for the project of reuse in its various forms and scales is the main objective of the Course. The Design Studio, through theoretical lessons, including master classes, and a series of discussions on projects, intends to offer a contribution to the Curriculum, aimed at training designers capable of facing, elaborating, and conducting regeneration processes territorial, urban, and building scale. The achievement of familiarity in relation to multiscalarity, multidisciplinary and the processes of participation with the main stakeholders, inhabitants and final users of the projects is an unavoidable objective of the course.

### Course illustration.

Università degli studi di Napoli Federico II, Design Seminar Across the Giant. Working group of the Università luav di Venezia: Mauro Marzo (team leader), Viola Bertini, Anhtu Breda, Jonatan Pizzini, Michela Tettamanti, Anna Valastro; collaborators Celeste Da Boit, Sandro Grispan, Giada Saviane. Project title: Connections. Project for the redesign of the access system to the former Convent of SS. Trinità delle Monache in Naples. Axonometric view



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural Heritage
- Cultural and Collective Memory
- Urban Narratives
- Urban Patterns
- Cultural Identity
- Cultural Enhancement

### HERITAGE TYPES

- Modern Heritage
- Industrial Heritage
- Cultural Landscape
- Urban Heritage
- Monumental Heritage
- Archaeological heritage
- Heritage sites

### DESIGN APPROACHES

- Heritage Reprogramming
- Recycling / Upcycling
- Community Building and Representation
- Historical Urban Landscape (HUL)
- Design for all in Cultural Heritage
- Multiscale Design Approach

### DESIGN ACTIONS

- Re-planning
- Redevelopment
- Regeneration
- Renovation
- Continued Use
- Adaptive Reuse
- Rebuilding
- Refurbishment / Rehabilitation
- Musealization
- Developing Cultural Routes and Itineraries

### TOOLS

- Space Syntax
- Morphogenesis study
- Mapping, Documenting and Cataloguing
- Use of GIS technology
- Collaborative workshop - CHARRETTE
- Artistic approaches (photography, video, performance)

## ☰ Course Syllabus

The Design Studio addresses the study, conducted in analytical and synthetic form, of themes and places related to the reuse of existing heritage through case studies which allow to interpolate different scales of the project, relationships with other disciplines and needs of contemporary living.

The Course is divided into theoretical seminars, held by the teacher or by guest experts (master classes), on the topic of recovering the existing in architecture, taking into consideration the most advanced approaches of contemporary architecture. The lessons cover both design issues and themes that relate the object of the design study to other disciplines (economic, regulatory, social issues, etc.) useful for building a general framework of reference for the project development and for the construction of objectives shared with the population, users, and stakeholders.

Parallel to the theoretical seminars, students will work in groups, both at home and in the classroom, with the purpose of conceiving, elaborating, and communicating the strategies and methods of design implementation.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- ▶ Written Exam
- ▶ Oral Exam
- ▶ Other

### ▶ **Demonstration of the syllabus coherence with the course objectives**

The theoretical seminars and practical work in classroom about reuse are aimed at emphasizing the importance of a multiscale, multidisciplinary and reactive approach, responding to the needs of the population, future users and key stakeholders.

With respect to the first point, the relationship between the designed building or group of buildings with the context at a bigger or smaller scale will be a central issue during the semester.

With respect to the second point, the master classes will offer the opportunity to involve external experts from other disciplines, useful for a conscious and sustainable construction of design strategies.

With respect to the third point, the organization of moments of presentation of the project development and the sharing of the results with the stakeholders will represent an opportunity to allow students to deal with co-participation practices.

### ▼ **Demonstration of the teaching methodologies coherence with the course objectives**

The work organization in groups is consistent with the progressive transformation of the figure of the architect in contemporary society, less and less readable as a professional who works individually and increasingly aimed at working in an associated form and with a multidisciplinary approach.

The involvement of the population and stakeholders allows the student's learning to be deeply rooted in a framework in which the needs and expectations of future users of open spaces and buildings subject to the students' design investigation are represented.

The presentation of best practices on different scales in the lessons and the identification of case studies for the design exercise that allow the students to develop the ability to approach from a multiscale, multidisciplinary and sensitive to the stakeholders' expectations perspective constitute the main actions for achieving the objectives.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- ▶ Written Exam
- ▶ Oral Exam
- ▶ Other

## ▼ COURSE STRUCTURE

1	Introduction lecture
2	Lecture on reusing built heritage. Key design strategies: case studies on the landscape scale
3	Assignment 1
4	Master class 1, guest expert (regulatory issues)
5	Discussion assignment 1
6	Lecture on reusing built heritage. Key design strategies: case studies on the urban scale
7	Discussion assignment 2
8	Master class 2, guest expert (social issues)
9	Discussion assignment 3
10	Lecture on reusing built heritage. Key design strategies: case studies on the building scale
11	Discussion assignment 4
12	Master class 3, guest expert (economic issues)
13	Discussion assignment 5
14	Discussion assignment 6 / Pre-examination review
15	Wrap-up lecture

GC1	1.1
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GC3	3.1
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GC4	4.1
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GC5	5.1
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GC9	9.1
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GC10	10.1
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GC11	11.1
	11.2
	11.3

≡ LITERATURE

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**CREHAR**  
UNESCO Chair

USE

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prepared by Mar Loren-Méndez; Daniel  
Pinzón-Ayala; Roberto F. Alonso Jiménez

S204

**design studio**  
book of courses

# CREATIVE URBAN REUSE (CUR) OF LOCAL MODERN HERITAGE

## COURSE ID CARD

semester	3
ECTS	9
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	5
OFL	
SRW	
Other	

### COURSE TYPES

- ▶ Design Studio
  - Intensive Workshop
  - Theory Course
- ▶ Seminar
  - Laboratory work
  - Research Thesis
- ▶ Field Work
  - Internship Practical training
- Other

### FORMS OF TEACHING

- Individual work
- ▶ Group work
- ▶ Supervision
- ▶ Master class

### Expected Prior Knowledge

The students should have overcome the Fundamentals course module offered in the first semester of the Master: its main contents and outcome: Contents: The complexity of the built heritage and the way of facing and dealing with it at all scales, taking into account: the notion of heritage and heritage genealogy – types and forms of heritage, values and attributes, forms and uses; heritage decay processes; understanding the relationship between heritage and sustainability; understanding vulnerability and risks related to the built heritage; aspects of heritage management. Outcome: students should know how to integrally approach the heritage and develop knowledge that enable them to perform the following methodological and practical steps on the built heritage: survey and identification of values and attributes, including pathology issues; characterization and documentation; valorization; designing strategies and actions; presentation of the built heritage; monitoring and maintenance; Students should have developed relevant skills, such as: context analysis tools; building heritage analysis tools (survey, mapping, documenting, cataloging, HBIM,...); heritage evaluation and assessment tools; Gained skills should enable students to perform relevant on-site analyses on the built heritage and to document and evaluate it properly.

### Courses objectives

The course aims to offer training on everyday local heritage, specifically the Modern heritage of the built environment, in order to identify relevant values and relevance, as to establish a common ground and a critical position for its potential reuse. This Design Studio (DS) approaches the reuse within the updated concept of heritage as introduced in the first semester, as well as in the present social and cultural context, as a key factor for sustainable urban development. This DS addresses the urban regeneration of this heritage as a complete process of urban and architectural documentation research, heritage identification, assessment and design regeneration strategies. After the training on research documentary methods in the first semester, this course proposes to integrate rational and experiential/emotional aspects of knowledge, offering the students methodological innovative training. The creative approach will be in all the phases -from documentation and historical research to values assessment and design strategies. In the context of creative city, the regeneration proposals aim to work on soft temporary interventions.

### Course illustration.

*Photographic approach to industrial heritage. Cerco industrial Peñarroya-Pueblonuevo, Cordoba (Spain). Cristina Manuel de Céspedes García, Alejandra Santander Gago, Ana Sanz De Frutos y María Gabriela Vieira Maroun.*



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural Studies
- Cultural Diversity
- Cultural and Collective memory

### HERITAGE TYPES

- Modern Heritage
- Industrial Heritage
- Emergent Heritage
- Urban Heritage
- Performative and Affective Heritage
- Vernacular Heritage

### DESIGN APPROACHES

- Multiscale Design Approach
- Design for All in Cultural Heritage

### DESIGN ACTIONS

- Temporary Planning
- Public Advocacy and Social Participation

### TOOLS

- Mapping Documenting and Cataloguing
- Creative and Artistic Approaches

## ≡ Course Syllabus

The Design Studio course Creative Urban Regeneration of Modern Everyday Heritage (CUR\_MEh) focuses on Modern heritage: Architecture, City and Landscape of the 19th and 20th century. UNESCO points out its vulnerability due to weak legal protection and low social appreciation, considering it a field of opportunity. CUR\_MEh continues and consolidates an updated concept of heritage, applying it to the most abundant type of urban heritage, which is modern heritage, working on both housing, industrial, and social infrastructures (cultural, sanitary, administrative) architectural heritage.

This design studio works on local case studies of modern architectural heritage as the framework for creative urban regeneration of the city. The students will have the opportunity of working on one specific city, choosing one case study.

The course is developed in 15 sessions, in which the students will combine studio sessions, with seminars on the different phases of the studio course:

W1\_Syllabus presentation and guests conference on process and results of previous projects on local modern heritage assessment and regeneration. Organization of teams and selection of case studies.

W2-W4\_Phase 1\_Documentary and modern heritage assessment + Present state Onsite. Seminar 01 + studio sessions

W5\_Phase 1\_Critic Session.

W6-W8\_Phase 2\_Creative urban strategies. Seminar 02 methods + studio sessions

W9\_Phase 2\_Critic session. Contemporary onsite interpretation. Artistic media: photography and cartographies.

W10-W13 Phase 3\_Creative urban strategies + Design Proposal. Seminar 03 + studio sessions

W14\_Phase 3\_Critic Session. Video proposal

W15\_Final submittal

### TEACHING METHODS

- Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- ▶ Presentation
- Technical report
- Research paper
- ▶ Essay
- Written Exam
- Oral Exam
- Other

### ▶ **Demonstration of the syllabus coherence with the course objectives**

On the one hand, it insists on the relevance of preserving this type of more modest heritage, in contrast with the most monumental and assumed one, working on protecting cultural diversity. On the other, the student will face heritage multiscalarity: they will work on architectural modern heritage reuse as a strategy for urban regeneration. Although the course will focus on architectural and urban scale, the territorial dimension will also be necessarily introduced.

### ▼ **Demonstration of the teaching methodologies coherence with the course objectives**

The core method is based on the problem-based learning, based on local case studies. The pedagogy integrates studio sessions (preparation in dialogue student-professor) and expository-participatory activities. Specifically, all the teams work on an architectural, urban heritage case study of a local city. The syllabus will propose a specific city, such as Seville, and its concrete local case studies on Modern heritage, such as industrial or/and housing heritage. Alternatively, the students can propose a case study in its own local city dealing with the same use/program proposed in the syllabus, which has to be accepted. Each student team develops a documentary research and heritage characterization, which leads to the design of creative strategies for the regeneration of the city.

Regarding the heritage characterization and creative strategies, the students are provided with specific bibliography on creativity and creative cities, as well as a bibliography on each heritage case study.

Transversal methodological approach\_A) From the teaching to learning perspective: the course is rooted in the central role of the student, proposing a classroom strategy driven by intensive participation and based on a symmetrical dialogue student/teacher; B) Critical and autonomous development of the student; C) Integrity of heritage process: documentation and historical research, to values assessment and sustainable regeneration strategies.

# METHODOLOGY

## ASSESSMENT METHODS

- Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- Technical report
- Research paper
- ▶ Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

- 1 **Introduction lecture** - Presentation and Guests conference on process. Organization of teams and selection of case studies

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- 2 **Phase 1** - Documentary and modern heritage assessment. Studio Session

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- 3 **Phase 1** - Documentary and modern heritage assessment + Present state Onsite. Seminar 01

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- 4 **Phase 1** - Present state Onsite (Walk, Interviews, Photography)

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- 5 **Phase 1** - Critic Session (Key frameworks and concepts)

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- 6 **Phase 2** - Creative urban strategies. Seminar 02 (methods)

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- 7 **Phase 2** - Creative urban strategies. Studio Session

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- 8 **Phase 2** - Creative urban strategies. Studio Session

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- 9 **Phase 2** - Critic session - Contemporary onsite interpretation (Artistic media: photography and cartographies)

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- 10 **Phase 3** - Creative urban strategies and Design Proposal. Seminar 03

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- 11 **Phase 3** - Creative urban strategies and Design Proposal. Studio sessions (Key design strategies)

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- 12 **Phase 3** - Creative urban strategies and Design Proposal. Studio sessions

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- 13 **Phase 3** - Creative urban strategies and Design Proposal. Studio sessions

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- 14 **Phase 3** - Critic Session (Video Proposal)

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- 15 **Phase 3** - Final Submittal

GC1	1.1
	1.2
GC2	1.3
	2.1
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GC3	2.3
	3.1
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GC4	3.3
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GC5	4.3
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GC6	5.3
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GC8	7.3
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GC9	8.3
	9.1
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GC10	9.3
	10.1
	10.2
GC11	10.3
	11.1
	11.2
	11.3

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prepared by Nataša Ćuković Ignjatović

S301

**design studio**

book of courses

# DESIGN FOR FLEXIBILITY

## COURSE ID CARD

semester	3
ECTS	15
status	elective

### ACTIVE TEACHING CLASSES

Lectures	
Exercises	
OFL	15
SRW	
Other	

### COURSE TYPES

- ▶ Design Studio
- Intensive Workshop
- Theory Course
- Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- ▶ Group work
- Supervision
- Master class

### Expected Prior Knowledge

Eligible applicants are individuals who have completed previous courses that are foreseen in the study program. Creativity; technical, organizational, communication, analytical, and visualization skills (integral protection approach)

### Courses objectives

The design studio aims to develop the ability to define a proposal that integrates programmatic, spatial and technological responses to the changing environmental context. Through studio work, students investigate the cause-and-effect relationships of architectural interventions in a given spatial framework, as well as different design approaches that use the potentials of the existing building, its site and the immediate environment. The focus of the work is on the creative application of the principles of bioclimatic, green and energy-efficient architecture in the design process, while enhancing the spatial, material and technological flexibility of use throughout the building's lifespan.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Resilience

### HERITAGE TYPES

- Modern Heritage
- Industrial Heritage
- Vernacular Heritage
- Emerging Heritage

### DESIGN APPROACHES

- Heritage Reprogramming
- Environmentally Responsive Design
- Energy Conscious Design
- Climate Sensitive Design
- Whole-Lifecycle Design
- Carbon Neutral Design
- Passive/Active Sustainable Design
- Renewable Energy Integration
- Design for All in Cultural Heritage
- Thermal Comfort Design
- Visual Comfort Design
- Green Blue Infrastructure
- Acoustic Comfort Design
- Multiscale Design Approach

### DESIGN ACTIONS

- Adaptive Reuse
- Refurbishment/ Rehabilitation
- Nature Based Solutions
- Circular Economy
- Microclimate improvement

### TOOLS

- Thermal/Energy Simulation
- Lighting Simulation
- Collaborative workshop - CHARRETTE
- 3D printing
- Artistic approaches (photography, video, performance)

## ≡ Course Syllabus

The contemporary approach to aspects of resilience in architecture implies a wide range of topics and a new contextualization of the architect's role in the process of creative use of built environment. By getting to know the current theoretical postulates, "filtering" them through discussions and work on the assignment, the student himself defines his theoretical starting points and then translates them into an architectural object, with all the elements of materiality.

In the initial phase of the work, the theoretical segment of the teaching refers to the formation of a thematic framework related to various aspects of resilience as a category that connects the ecological, social and material implications of architectural activity, while students are then introduced to the principles and systems of bioclimatic, green and energy-efficient architecture suitable for the chosen program access to the topic. The design proposals are expected to continuously develop the options for flexibility, starting from program and conceptual design throughout the materials and detailing, discussing them with their peers, faculty and external guest. Specific design and evaluation tools are used both for validation throughout the design process and for argumentation in the discussions and presentations.

Students are expected to research programmatic, architectural and technological solutions that will provide a contemporary response to the challenges of urbanization in a specific climatic, social and spatial context.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- ▶ Written Exam
- ▶ Oral Exam
- ▶ Other

### ▶ **Demonstration of the syllabus coherence with the course objectives**

Students recognize and understand how concepts of resilience are introduced into designing the interventions on the existing buildings. The studio combines a variety of relevant design approaches and strongly encourages integrative design approach, permanent interaction between the peers and the relevant actors. Design and evaluation tools are used by students for validation throughout the design process and for argumentation in the discussions and presentations. The resulting high level of objectivity is used in various forms of presentation and communication, enabling wider and comprehensive public outreach.

### ▼ **Demonstration of the teaching methodologies coherence with the course objectives**

Individual and team work, research projects, discussions, presentations; site visits, interactive forms of teaching, case studies, combined throughout the semester.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- Case Studies
- Animation
- Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- ▶ Oral Exam
- Other

## ▼ COURSE STRUCTURE

1	Introduction lecture and site visit – linking resilience, environment and people; concepts of green building and design for flexibility in relation to architectural program
2	Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, interview ....)
3	Key Challenges – architectural program and environmental context, site assessment
4	Key Challenges – cultural and material values of the existing structure
5	Practical skills 2 - representation of cultural and material specificity in relation to architectural program and design approach
6	Pre examination activity / discussion assignment 1 - presentation and validation of architectural program and design approach
7	Key framework and concepts – green building design
8	Key framework and concepts – design for flexibility , circular economy
9	Pre examination activity – conceptual design – presentation, discussion, assessment
10	Key design strategies - passive measures,
11	Key design strategies - design for flexibility , design for disassembly etc.
12	Practical skills 3 – testing and valorisation of key design features
13	Pre examination activity – presentation via infographic, discussion
14	Finalisation of architectural design
15	Wrap-up lecture; preparations for final presentation

GC1	1.1
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GC2	2.1
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GC3	3.1
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GC8	8.1
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GC9	9.1
	9.2
	9.3
GC10	10.1
	10.2
	10.3
GC11	11.1
	11.2
	11.3

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prepared by Jelena Ristić -Trajković

S302

**design studio**

book of courses

# ENHANCING HEALTH AND WELLBEING ASPECTS OF HERITAGE THROUGH ARCHITECTURAL DESIGN

## COURSE ID CARD

semester	3
ECTS	9
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures	
Exercises	
OFL	
SRW	
Other	

### COURSE TYPES

- ▶ Design Studio
- Intensive Workshop
- Theory Course
- Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- ▶ Group work
- ▶ Supervision
- Master class

### Expected Prior Knowledge

The course is compulsory. To be eligible for admission to this course, students should have finished DESIGN STUDIO 1 and 2

### Courses objectives

The main objective of the course is to empower students with design methods for the enhancing of health and wellbeing aspects of heritage through contemporary architectural reprogramming methodologies. The studio is focused on the programmatic articulation of health and well-being values of environment, and their implementation into architectural and urban practice of heritage reprogramming, both from the perspective of contemporary development, and in relation to future scenarios and strategies. Through multi-scalar and problem-based research, students are expected to define sustainable and resilient architectural programs, and develop design solutions that responds to uncertainty and the ever-changing needs, in the spatial, social and temporal dimensions, in order to achieve a positive impact on the overall wellbeing. The general objective is to understand and improve the practice of the architectural profession in improving human, but also environmental, health and wellbeing in the context of heritage environments, as one of the priorities of modern society.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Resilience
- Cultural Studies, Cultural Diversity
- Urban Narratives
- Cultural Enhancement

### HERITAGE TYPES

- Tangible and Intangible
- Urban
- Natural
- Cultural Landscape
- Emerging

### DESIGN APPROACHES

- Heritage Reprograming
- Environmentally Responsive
- Community Building and Representation

### DESIGN ACTIONS

- Redevelopment
- Nature Based Solutions
- Public Advocacy for Social Participation
- Microclimate Improvement

### TOOLS

- Mapping, Document., Cataloguing
- Artistic Approach
- Heritage Value Matrix
- (Post)-occupancy evaluation

## ≡ Course Syllabus

### Theoretical course content

The focus is on topics that consider the reciprocal and complex environment-behavior relations, with special attention on the enhancement of the health and wellbeing issues within heritage sites. The theoretical content is developed through active discussion and critical thinking of key concepts and phenomena that determine the topic: the concept of healthy spaces, heritage as a healthy place, the role and application of environmental-behavioral theories in architectural research and design of healthy spaces, as well as of the importance of temporal dimensions, and future scenarios and strategies.

The broader thematic framework is aimed at redefining the patterns of pro-environmental behavior, education and research.

### Practical course content

The focus is on the application of theoretical knowledge in architectural practice.

Practical course content is based on research through design, relying on architectural programming methodological framework including place-based, value-based and evidence-based methodology, as well as systems thinking, and deeper understanding of our evolutionary nature.

First, students conduct problem-based research and examine the programmatic and spatial framework of the contemporary environmental and health issues within the specific given environments. Then develop a framework for redefining and enhancing the relationship between health and well-being issues of a specific place. In the end, subject of the design project is the spatial interpretation of the previous two steps through a conceptual architectural design solutions.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- ▶ Written Exam
- ▶ Oral Exam
- ▶ Other

### ▶ **Demonstration of the syllabus coherence with the course objectives**

Considering **health and wellbeing as a multidimensional concept that changes in the spatial and temporal dimensions** (they change in time, place and culture), this course relies on the structure and objectives of the study program in the third semester and **builds on Fundamentals 3** which deals with heritage as a part of ever-changing and social environment. It deepens further dynamic understanding of reciprocal relations between heritage, sustainability, people and environment. The course is in accordance defined design strategies of Fundamentals 3, considering that Design for Health and wellbeing is recognized as one of the key design strategies.

In accordance with the need to re-examine existing and explore new forms of the relationship between future life of heritage and social wellbeing, the course examines different possibilities of improving this relationship through architectural programming methodological framework. Defined goals are fully in line with programme syllabus, especially considering aspects of intangible heritage. Unlike a traditional approach to heritage generally limited to considering mainly the visible values of the place, this course stands on the belief that, in the context of heritage, the implementation and application of behavioral knowledge in architectural discourse contributes to the intensification and enhancement of these relations.

### ▼ **Demonstration of the teaching methodologies coherence with the course objectives**

Teaching takes place through a combination of interactive forms of teaching, case studies, seminars, presentations, individual and group research, on site and site-specific analysis workshops, visual essays, design, etc.

The course will be assessed through group discussion and individual design assignments.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- ▶ Written Exam
- ▶ Oral Exam
- ▶ Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking health, heritage and resilience
2	Critical interpretation of the given THEMATIC FRAMEWORK: location visit, a study of the existing condition, analysis of historical materials, diagramming of key relationships
3	ARCHITECTURAL ANALYSIS and conceptualization: Research through architectural drawing and diagram, writing architectural scenario
4	Conceptualization of ARCHITECTURAL PROGRAM: Research through architectural drawing and diagram, writing an architectural scenario
5	Testing the SPATIAL AND PROGRAMMATIC concept: Research through a physical model, modelling the spatial and functional structure
6	Pre examination activity / discussion assignment 1
7	Research through design
8	Research through design
9	pin-up
10	DEVELOPMENT of spatial and functional structure
11	DEVELOPMENT of spatial and functional structure
12	DEVELOPMENT of spatial and functional structure
13	Pre examination activity / discussion case study
14	PHYSICAL MODELS: Finalization of the design project
15	Final consultations / GRAPHICAL PRESENTATION: Finalization of the design project

GC1	1.1
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GC2	2.1
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GC3	3.1
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GC8	8.1
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GC9	9.1
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	9.3
GC10	10.1
	10.2
	10.3
GC11	11.1
	11.2
	11.3

≡ LITERATURE

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AUTH

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prepared by Konstantinos Sakantamis,  
Angeliki Chatzidimitriou

S303

**design studio**  
book of courses

# RESILIENCE AND FUTURE HERITAGE

## COURSE ID CARD

semester	3
ECTS	15
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures	3
Exercises	1
OFL	
SRW	
Other	

### COURSE TYPES

- ▶ Design Studio
- ▶ Intensive Workshop
- Theory Course
- Seminar
- ▶ Laboratory work
- ▶ Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- ▶ Group work
- ▶ Supervision
- Master class

### Expected Prior Knowledge

It is essential that students are familiar with the following notions, design approaches, actions and tools: Restoration, Refurbishment / Rehabilitation, Regeneration & Adaptive reuse, Environmentally responsive & Climate sensitive design, Energy conscious & Passive/Active sustainable design, Green blue infrastructure, Nature Based Solutions, Microclimate improvement. It is useful that the students are familiar with Collaborative Cartography, Mapping Documenting and Cataloguing, Use of GIS Technology, Artistic Approaches, Heritage Value Matrix, Thermal/Energy/Lighting Simulation, Microclimate Simulation.

### Courses objectives

The course focuses on the redevelopment of dense urban areas within historic city centres. It deals with the interplay between cultural heritage values and intense commercial use, aiming to identify, evaluate, and utilise tangible and intangible heritage for composing sustainable scenarios towards enhanced urban resilience of the project area and the city at large. The studio engages students with current and future challenges while preserving spatial cultural identity and improving environmental performance of building stock and outdoor spaces' microclimate. The issues raised in historic mixed use residential and commercial areas, which constitute distinctive parts of the urban fabric, closely link the notions of Cultural Identity, Resilience, and Future Heritage. These entail an elaboration on the evolution of Urban Heritage in the establishment of multifaceted Heritage Sites, where Modern Heritage emerges in areas occupied by Historic Monuments, whereby Tangible and Intangible Heritage retain equal importance for the preservation of cultural identity. Students will need to focus on Restoration but also on Regeneration principles, on warranting the Continuation of Uses but also on Adaptive Reuse and ultimately on the possibility of ensuring an environmentally sustainable and resilient urban area that can benefit from the application of Nature based Solutions for Microclimate Improvement.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Resilience
- Cultural identity
- Cultural heritage
- Urban patterns
- Urban narratives

### HERITAGE TYPES

- Urban heritage
- Modern heritage
- Heritage sites
- Tangible and intangible heritage
- Monumental heritage
- Emerging heritage

### DESIGN APPROACHES

- Passive / Active sustainable design
- Recycling / Upcycling
- Renewable energy integration
- Community Building and Representation
- Temporary planning and meanwhile spaces

### DESIGN ACTIONS

- Restoration
- Regeneration
- Redevelopment
- Adaptive reuse
- Continued use
- Public Advocacy for Social Participation
- Cultural and Collective Memory
- Nature based solutions
- Microclimate improvement

### TOOLS

- Data logger
- Mapping, Documenting and Cataloguing
- Thermal/energy simulation
- Lighting simulation
- Post occupancy evaluation
- Artistic approaches
- Heritage Value Matrix

## ≡ Course Syllabus

In order to contemplate on the course objectives, linking sustainability and heritage notions, students will compose urban redevelopment proposals in a historic urban centre following three complementary approaches which stem from the main components of a historic urban market area or commercial neighbourhood: the built constructions within the commercial area, the internal open spaces, routes and paths and those which link the market area with its surroundings, and the surrounding building blocks which form the background and a permeable boundary between the market area and the city.

The course will include site survey and analysis of urban morphology, heritage matrix and microclimate conditions, concept and strategies development regarding regeneration and resilience, precedent case studies investigation and design proposals on the urban scale for open spaces and built urban background and on detailed building scale at selected parts of the building stock focusing on restoration, regeneration, social and environmental challenges promoting resilience through mixed use patterns perspective. Proposals will take into account short term and long-term future scenarios and changes which may emerge due to socioeconomic developments, environmental parameters and climate change effects and will incorporate pertinent adaptation potential for the urban environment.

An intensive workshop for the utilisation of monitoring and simulation methods to evaluate existing conditions and project design proposals will take place in two stages within the studio course, following the respective activities (site analysis and proposal developments) for both built structures and outdoor spaces. The assessment of the case study area and the proposals will be based on quantitative and qualitative indices on various parameters and targets achievement. The workshop's student work output will form a short technical report to complement design proposals.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- ▶ Written Exam
- ▶ Oral Exam
- ▶ Other

### ▶ Demonstration of the syllabus coherence with the course objectives

The studio views the condensed traditional commercial areas of historic city centres as a resource in attaining social, economic, cultural and environmental sustainability goals as well as resilience for the parent city at large. The course case study project will employ sustainability and resilience indicators to build upon and evaluate existing conditions of the built environment, past design interventions but also occupant triggered bottom-up approaches and cultural activities. Students will be challenged with issues of cultural identity, occupancy and land use, the environmental performance of historic and contemporary urban fabric, the requirements for restoration and upgrade of the building stock and the redesign of public or private open space areas.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

The design studio methods include site analysis, case study heritage value analysis and documentation, climate analysis and environmental design strategies, restoration, conceptual development of urban regeneration, cultural identity integration in the design proposals - both in urban and building scale. The tools utilised for the development of concepts and proposals will include basic surveys, drawings, diagrams and models as well as additional tools such as Photogrammetry, GIS Technology, Collaborative Cartography, Data Loggers, Mapping Documenting and Cataloguing, Artistic Approaches, Thermal/Energy/Lighting Simulations, Microclimate Simulations, which will assist the identification and valuation of variable heritage types and sustainability challenges in the study area and the assessment of regeneration, environmental performance and resilience strategies of the proposals and future scenarios.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- ▶ Written Exam
- ▶ Oral Exam
- ▶ Other

## ▼ COURSE STRUCTURE

- 1 **Introduction lecture:** Project scope, site presentation, key notions, issues and challenges, outputs, activities schedule

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- 2 On site activity: Site survey, urban morphology mapping, heritage matrix mapping, microclimate mapping

---

- 3 Design studio: Site analysis, concept development, regeneration strategies, resilience strategies

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- 4 **Exercise:** Precedent case studies investigation on regeneration and resilience

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- 5 **Intensive Workshop stage I – practical skills development – lecture on simulation methods and tools** Monitoring, Simulations, site and built structures evaluation based on measurable data (output: technical report part I)

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- 6 **Students Presentation** Existing conditions evaluation, future scenarios targets & strategies, qualitative and quantitative indices

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- 7 Design studio: Future scenarios design proposals urban scale / routes, paths, open spaces / environmental and social challenges

---

- 8 Design studio: Future scenarios design proposals urban scale / surrounding blocks / energy conscious design and reuse challenges

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- 9 Design studio: Future scenarios design proposals building scale / overview and selection of a case within the study area

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- 10 Design studio: Future scenarios design proposals building scale / restoration and rehabilitation challenges

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- 11 Design studio: Future scenarios design proposals building scale / environmental challenges

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- 12 **Intensive Workshop stage II – practical skills development – lecture on evaluation methods by simulation results** Future scenarios design proposals / environmental assessment simulations / energy performance / daylight / user comfort (output: technical report part II)

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- 13 **Students' Midterm Presentation** Review of design proposals – environmental assessment and long-term/mid-term/short-term strategies

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- 14 Design studio: Future scenarios design proposals / environmental evaluation / adaptation

---

- 15 Design studio: Future scenarios design proposals / regeneration targets evaluation / resilience targets evaluation / adaptation potential

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Hersus I06: International handbook for students on Research and Design for the Sustainability Heritage



**CREHAR**  
UNESCO Chair

USE

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prepared by José Peral-López; Enrique Larive-López

S304

**design studio**  
book of courses

# HYBRIDS PRODUCTS IN LANDSCAPE: OPERATIONAL AND ACCESSIBLE INFRASTRUCTURES FOR HERITAGE AND SUSTAINABILITY

## COURSE ID CARD

semester	3
ECTS	9
status	compulsory

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	5
OFL	
SRW	
Other	

### COURSE TYPES

- ▶ Design Studio
- ▶ Intensive Workshop
- ▶ Theory Course
- ▶ Seminar
- ▶ Laboratory work
- ▶ Research Thesis
- ▶ Field Work
- ▶ Internship Practical training
- ▶ Other

### FORMS OF TEACHING

- ▶ Individual work
- ▶ Group work
- ▶ Supervision
- ▶ Master class

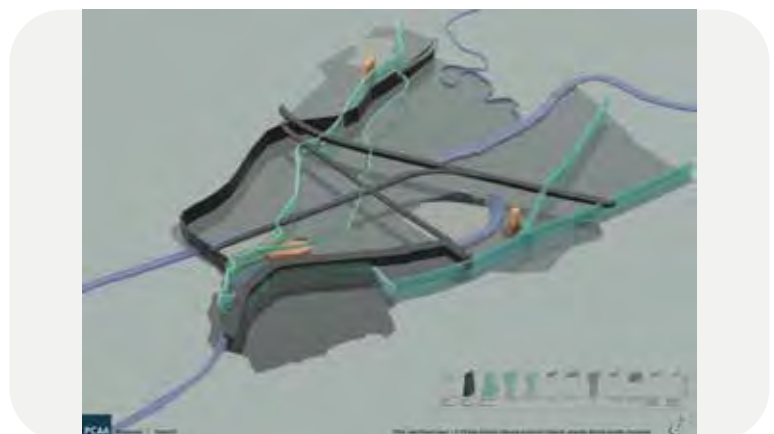
### Expected Prior Knowledge

Recently, landscape has firmly emerged as a support and cultural synthesis resulting from successive conceptual, thematic and territorial expansions that have had territorial expansions that have affected the structure of cultural heritage management worldwide. It can be considered as a privileged observatory in which to discover, analyse and rethink the territorial, social and cultural conflicts that globalisation currently maintains with permanence and recycling in heritage contexts. It is necessary to insist on the idea of the laboratory as a process and contemporary identity to foster new thoughts and attitudes and as an opportunity to show what technology is allowing us to achieve, especially in the elaboration of transversal narratives of approaching the landscape associated with the production of active data cartographies, connected to the already existing spatial data infrastructures. The course is compulsory. To be eligible for admission to this course, students should have finished DESIGN STUDI 1 and 2.

### Courses objectives

The course pretends to provide students theoretical and methodological knowledge to articulate factors from the landscape and urban areas aimed at enhancing the contribution of the architecture as a factor of development and innovation for the territory. Emphasis on multiscale approach. Using cultural heritage as a means to give the region a distinctive character and make it more resilient is undoubtedly a good practice. It is thus proposed to work on a historical, socio-ecosystemic and creative knowledge of the territory. This Design Studio (DS) addresses resilience within the updated concept of heritage and sustainability introduced in the first semester, and training in everyday local heritage in the context of urban regeneration, its social dimension and the social dimension. After training in research methods both as documentary and experiential, this course proposes to integrate new technologies in the active exploration of heritage from a multi-scale vision as a source of knowledge, inspiration and creativity, making heritage more accessible.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural and Collective Memory
- Urban Narratives
- Resilience
- Urban Patterns
- Heritage genealogy
- Cultural Studies
- Cultural Diversity
- Cultural Identity
- Cultural Enhancement

### HERITAGE TYPES

- Modern heritage
- Industrial Heritage
- Vernacular Heritage
- Performative and Affective Heritage
- Tangible and Intangible Heritage
- Cultural Landscape
- Urban Heritage
- Monumental Heritage
- Emerging Heritage
- Documentary Heritage
- Archaeological Heritage
- Heritage Sites
- Natural Heritage

### DESIGN APPROACHES

- Heritage Reprogramming
- Environmentally Responsive Design
- Energy Conscious Design
- Whole-Lifecycle Design
- Carbon Neutral Design
- Passive/Active Sustainable Design
- Community Building and Representation
- Renewable Energy Integration
- Historical Urban Landscape- HUL
- Design for All in Cultural Heritage
- Thermal Comfort Design
- Visual Comfort Design
- Green Blue Infrastructure

### DESIGN ACTIONS

- Preventive Conservation
- Integral Heritage Protection
- Conservation
- Restoration
- Redevelopment
- Adaptive Reuse
- Consolidation
- Temporary planning and Meanwhile spaces
- Refurbishment/ Rehabilitation

## ≡ Course Syllabus

The Design Studio course HYBRIDS PRODUCTS IN THE LANDSCAPE: Operational and Accessible INFRASTRUCTURES FOR HERITAGE AND SUSTAINABILITY propose to work both from the specific historical and heritage knowledge of the territory and from its socio-ecosystemic reading as keys to sustainable territorial development. The training activities combine specific knowledge of the territory with specific training in methodologies and instruments for its approach. The contributions of expert collaborators are incorporated both from the point of view of content and from the instrumental point of view. Students are introduced to the knowledge of the cultural landscape (case study standard), its history, logics of transformation and territorial singularity and heritage readings, from the scale of architecture, infrastructure, rurality and territory. Work will therefore be done on critical knowledge of the territory in order to be able to identify the uniqueness and specificity of its values. In this sense, the following contents will be offered. The course is developed in 15 sessions and taking into account students have learned how can built heritage be adjusted to the contemporary needs of PEOPLE AND SOCIETY it is proposed the followings blocks:

1. Background. The found territory. The transformed landscape as a new landscape.

2. Periods of occupation and logics of transformation. The standard case study.

3. Towards its heritage characterisation. Background in methodological developments. The proposed case study.

W1\_Syllabus presentation and guests conference on process and results of previous projects on local modern heritage assessment and regeneration. Organization of teams.

W2-W5\_Phase 1\_Multiscale design approach. Lessons. Cartographies and resources.

W6-W9\_Phase 2\_Present Case Study Standard. Place Profile and Problematization. Conclusions

W10-14 Phase 3\_ Case study proposed. Studio sessions.

W15\_Final submittal.

- Heritage Management
- Nature Based Solutions
- Public Advocacy for Social Participation
- Developing Cultural Routes and Itineraries

### TOOLS

- Image Rectificatio
- 3D printing
- As-Built / As-Found Recording
- Space Syntax

- Morphogenesis Study
- Mapping, Documenting, Cataloguing
- Use of GIS Technology
- Collaborative Cartography
- Artistic approaches (photography, video, performance)
- Heritage Value Matrix
- Lighting Simulation
- (Post)-occupancy evaluation

### TEACHING METHODS

- Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- ▶ Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- ▶ Presentation
- Technical report
- Research paper
- ▶ Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

The course pretends to work on training students in the development of characterisation methodologies, emphasizing multiscale design. In that sense the Case Study Standard offers this starting point: the knowledge of methodologies to be capable of approaching socio-ecosystemic, heritage and creative characterisation from an interdisciplinary, holistic and all-encompassing perspective, thus overcoming the conception of heritage as solely architectural and urban. Instrumental and documentary supports, spatial data and graphic and cartographic documentation.

With the exercise of the course, case study propose, students will apply what was developed at the beginning of the course in a specific situatio

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

The core method is based on problem-based learning, based on local case studies. The pedagogy integrates studio sessions (preparation in dialogue student-professor) and expository-participatory activities. Specificall , all the teams work on an architectural, urban heritage case study of a local city. The syllabus will propose a specific city, such as Seville Metropolitan Area, and its concrete local case studies on Cultural Landscape. According to phasing, the students will work on the case study proposed. Each student team develops a documentary research and heritage characterization, which leads to the design of creative strategies for the regeneration of the territory.

Regarding the heritage characterization and creative strategies, the students are provided with specific bibliography on creativity and creative strategies, as well as a bibliography on each heritage case study.

Transversal methodological approach\_A) From the teaching to learning perspective: the course is rooted in the central role of the student, proposing a classroom strategy driven by intensive participation and based on a symmetrical dialogue student/teacher; B) Critical and autonomous development of the student; C) Integrity of heritage process: documentation and historical research, to values assessment and sustainable regeneration strategies.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- Technical report
- Research paper
- ▶ Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability, heritage and people and environment
2	Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, interview ....) The standard case study. The found territory. The transformed landscape as a new landscape
3	Key Challenges Site analysis, mapping, historical cartographics.
4	Key Challenges Multiscale design
5	Practical skills 2 The standard case study (cont.) / Periods of occupation and logics of transformation
6	Pre examination activity / discussion assignment 1 Student presentation. Existing conditions evaluation. Alternative scenarios
7	Key framework and concepts Mapping, Documenting, Cataloguing / Use of GIS Technology / Collaborative Cartography
8	Key framework and concepts Communication and artistic approaches
9	Pre examination activity / case study Introduction to the case study proposed
10	Key design strategies Heritage Value Matrix
11	Key design strategies Advocacy for Social Participation
12	Practical skills 3 The case study proposed. Working with heritage as a key source for sustainable development
13	Pre examination activity / discussion case study References
14	Case Study Student presentation
15	Wrap-up lecture + whole project review

≡ LITERATURE

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# COURSES

# SPECIALIZATIONS

Heritage Impact Assessment



Heritage Layers - The Process of Reviving Abandoned Open Public Areas



Heritage Reprogramming



Mapping Urban History



IEQ in Historic Buildings



Conservation and Preservation - Interactions Between Theory and Practice



Architecture and Heritage Tourism



Scenario Planning



Digital Humanities and Digital Knowledge for The Preservation Of Cultural Heritage



Special Topics on Recording and Documenting Historic Buildings



Rehabilitation and Adaptive Reuse in The Context of Sustainable Development



Environmental Building Design



Environmental Features of Vernacular Architecture -  
Documentation and Assessment



Environmental Monitoring and Simulation



Evolution of Ideas, Theory, Practices and Interdisciplinary Approaches of  
Urban Conservation



Environmental Parameters in Vernacular Architecture



Modernist Architecture Restoration



Historic Urban Landscape (Hul)



UBFA

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prepared by Aleksandra Djordjević

SC01

**specializations**

book of courses

# HERITAGE IMPACT ASSESMENT

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	5
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- Theory Course
- ▶ Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- Individual work
- ▶ Group work
- Supervision
- Master class

### Expected Prior Knowledge

Understanding of Urban heritage, Knowledge of national and EU policies regarding heritage and sustainability

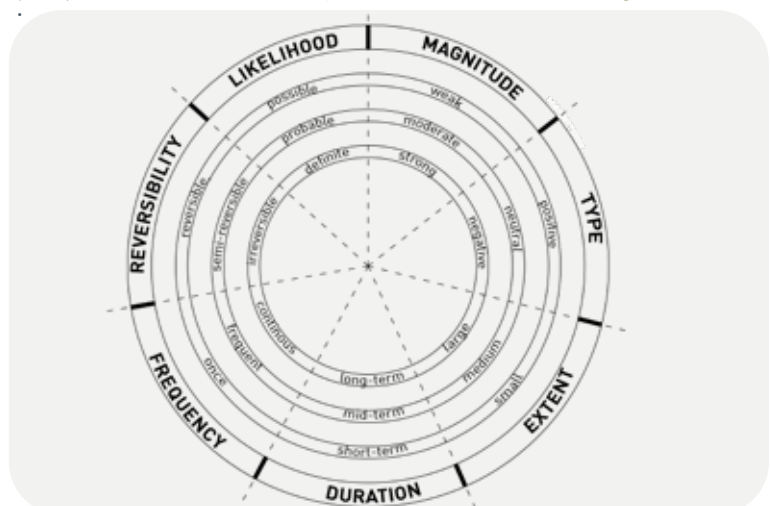
### Course objectives

Urban heritage is exposed to increasing pressure from diverse types of development and infrastructural projects and services, market pressures, climate change, environmental threats, and socio-economic changes. Transformations of the urban fabric become more and more intense and extensive in scope, rarely succeeding to preserve the balance between people and the natural and built environment. The overall aim of the course is to contribute to the process of professional judgement by unfolding the complexity of the urban development projects when dealing with sustainability and heritage. Specific objectives of the course are:

- A. contribute to the understanding of Identifying the main attributes of the specific site in the early stage
- B. mapping and understanding the positive and negative impacts of the development project
- C. understanding the characteristics of potential impacts regarding magnitude, type, extent, duration, frequency, reversibility, and likelihood.
- D. understanding who benefits (or not) from the impacts and transformation itself
- E. Gain knowledge on mitigation and enhancement measures
- F. increasing level of communication with professional and non-professional public
- G. Applying relevant methodologies for impact assessment.

### Course illustration.

Illustration by Aleksandra Đorđević, based on UNESCO, ICCROM, ICOMOS and IUCN (2022) *Guidance and Toolkit for Impact Assessment in World Heritage Context*



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural heritage

### HERITAGE TYPES

- Cultural landscape
- Urban Heritage
- Natural Heritage

### DESIGN APPROACHES

- Historical Urban Landscape
- Design for all in Cultural Heritage

### DESIGN ACTIONS

- Preventive conservation

### TOOLS

- Heritage Value Matrix

## ☰ Course Syllabus

The methodology for the Heritage Impact Assessment (HIA) will follow the most recent Guidance and Toolkit for Impact Assessment developed and published in cooperation of UNESCO, ICCROM, ICOMOS and IUCN in 2022, trying to adapt the methodology to the urban heritage.

Four step analysis will create the content of the course:

1) identifying values and attributes through desk research, site visits, engagement activities with rights-holders, local communities and other stakeholders (aimed at understanding the importance of Identifying the main attributes of the specific site in the early stage - goal A)

2) understanding and identifying potential impacts, e.g. demolishing, construction of new buildings, relocation of residents (mapping and understanding different nature of impacts of the development project - goal B),

3) illustrating how proposed action will potentially interact with the attributes, positive or negative following the set model with three levels of quantitative evaluation and qualitative argumentation of the assessment (asses magnitude, type, extent, duration, frequency, reversibility, and likelihood), and understand who benefits or loses)

4) evaluating potential impacts and providing measures. Students will be encouraged to illustrate first three phases. These steps should allow students to gain knowledge on mitigation measure and apply relevant methodology for impact assessment.

### TEACHING METHODS

- Technical drawings
- Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- Design Project
- Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ► Demonstration of the syllabus coherence with the course objectives

During the course, students will assess the impacts of various development projects in a two fold manner a) before the implementation – to identify values and attribute, to understand how to prevent and identify sustainable options, and b) after the implementation – to understand the extent of the consequences, lessons to be learned, and measures to be adopted. The reasoning behind addressing the issue of “assessment” in relation of heritage and sustainability is considered in the importance of the act of judging and deciding the extent, value, quality, or importance of urban development project. Additionally, Environmental impact assessment (EIA) has become part of the regulation and planning procedure in most countries, while heritage impact assessment (HIA) can be perceived as an non mandatory

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

During the course, case studies will be used as a framework for following both positive and negative impacts of the urban development projects on urban heritage. Additionally, set of scenarios and simulations will be used as extreme cases that should prompt reflection and professional judgment, even though they are unlikely to occur. Additionally, taking into account cultural specificity and a locally sensitive approach, students will be encouraged to choose a project for analysis from a context they know well.

# METHODOLOGY

## ASSESSMENT METHODS

- Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- ▶ Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- Design Project
- Presentation
- Technical report
- ▶ Research paper
- Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

1	<b>Introduction lecture</b> linking sustainability, heritage and assesment
2	<b>Key Challenges of Urban Heritage</b> assignment 1 (find the relevant case study)
3	<b>Case study presentation</b> collaborative mapping of values
4	<b>Step 1. Mapping and illustration of values and attributes of the site</b> (e.g. collage, analogues maps)
5	<b>Step 2. Understanding and identifying potential impacts</b>
6	<b>Pre examination activity / 1</b>
7	<b>Step 3: mapping how proposed action will potentially interact with the attributes</b>
8	<b>Step 3: illustrating how proposed action will potentially interact with the attributes – scenario developing</b>
9	<b>Pre examination activity / 2</b>
10	<b>Step 4: evaluating potential impacts</b>
11	<b>Step 4: evaluating potential impacts - discussion</b>
12	<b>Step 4: defining measures</b>
13	<b>Comparative analysis of various case studies</b>
14	<b>Developing ideas for the communication of the assesment</b> (exploring various media and channels of communication)
15	<b>Wrap-up lecture</b>

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\*Index list provided in the Annex 1

### LITERATURE

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prepared by Ana Zorić

SC02

**specializations**

book of courses

# HERITAGE LAYERS - THE PROCESS OF REVIVING ABANDONED OPEN PUBLIC AREAS

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	5
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- ▶ Intensive Workshop
- Theory Course
- ▶ Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- ▶ Other

### FORMS OF TEACHING

- ▶ Individual work
- Group work
- Supervision
- Master class

### Expected Prior Knowledge

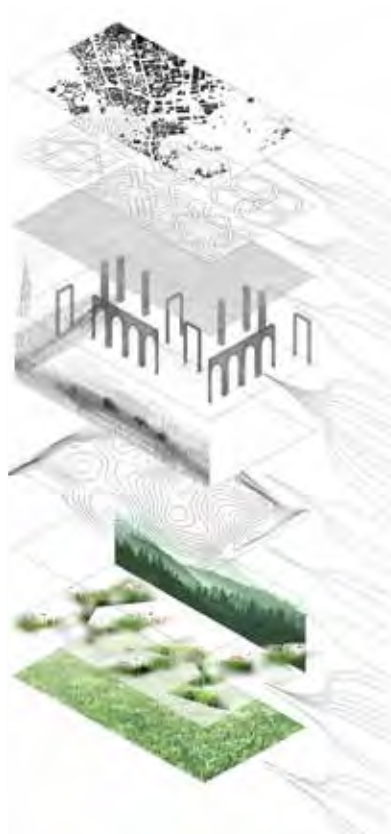
Understanding of Urban heritage and interests in abandoned urban spaces

### Course objectives

The goal of the course is to train students to recognize the inherited values of a place and their meaning in modern living conditions, that is, to learn to observe and read space as a layered category. Dealing with the topic of abandoned and devastated spaces within open public zones, students learn to research, recognize and systematize different layers of heritage from a contemporary perspective, interpret and explain them, and finally present their reflection of recognized values in the design process of their revival. By presenting the recognized features of the space through drawing, diagram, and collage, it is possible to get to know the layers of the space and the characteristics of the heritage more precisely, but it also opens up new ways of their interpretation for the further stages of the research and design process.

### Course illustration

*Illustration by Ana Zorić.*



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural heritage

### HERITAGE TYPES

- Performative and Affective Heritage
- Cultural landscape
- Urban Heritage
- Natural Heritage

### DESIGN APPROACHES

- Heritage reprogramming
- Historical urban landscape

### DESIGN ACTIONS

- Adaptive Reuse

### TOOLS

- Mapping, Documenting and Cataloguing
- Artistic approaches

## ☰ Course Syllabus

Theoretical teaching takes place through a series of lectures that introduce students to the basic categories that are dealt with within the course: abandoned space, open public zones, and manifestations of inherited values; Practical teaching involves the selection of a certain space following the topic, which each of the students will individually explore, using a combined methodology - from observation, through analysis of the relevant theoretical framework, to presentation through a drawing. An important part of the research is the presentation of the investigated characteristics through layered axonometry, to interpret heritage layers in the service of creating an information base for design intervention. Layered axonometry enables a clear systematization of the investigated characteristics in a graphic sense, as a suitable base for further interventions, but also an inventive way of presenting hidden and compressed layers of heritage. The final part of the work on the subject refers to the reflection of the analyzed concerning the contemporary context, interpreted through possible scenarios of the revitalization of the given spaces to preserve the recognized values.

### TEACHING METHODS

- Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- ▶ Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- Design Project
- ▶ Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

Through familiarization with the basic categories that the course covers, students learn about the complexity of the term heritage and the ways of its manifestation in the modern moment. The method of working on the subject enables the understanding of the phenomenon of heritage in the domain of abandoned open public spaces in theoretical and practical discourse, which forms a knowledge base for recognizing this category in other spatial and program scopes. The research skills acquired in the course facilitate the understanding of complex spatial categories in other research (such as a master thesis) and encourage design creativity in the domain of architectural intervention with inherited values.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

By combining different research methods, students acquire a diverse base of tools for research and recognition of inherited values in different contexts - spatial, temporal, cultural, and experiential. By forcing the methods of graphical representation of recognized values, drawings, diagrams, and collages, it is possible to distinguish individual features more precisely and in detail, but also to examine ways of interpreting heritage in different domains. In addition, by choosing a specific spatial situation as a design problem, students learn to recognize inherited values in their environment and develop a sense of preserving these values in the modern moment, through the design process of reviving abandoned open public spaces.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- Case Studies
- Animation
- ▶ Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- ▶ Design Project
- Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability, heritage and people and environment
2	Case study - presentation of the application of possible research tools
3	Researching examples from the environment
4	Mapping of values – drawings, collages, diagrams
5	Mapping of values – drawings, collages, diagrams
6	Pre examination activity 1
7	Examination of possible scenarios for revitalizing the space
8	Program recognition according to mapped values
9	Recognition of spatial transformations in accordance with mapped values
10	Preliminary setup of layered axonometry
11	Design project
12	Design project
13	Pre examination activity 2
14	Finalization of layered axonometry
15	Wrap-up lecture

<b>GC1</b>	1.1
	1.2
	1.3
<b>GC2</b>	2.1
	2.2
	2.3
<b>GC3</b>	3.1
	3.2
	3.3
<b>GC4</b>	4.1
	4.2
	4.3
<b>GC5</b>	5.1
	5.2
	5.3
<b>GC6</b>	6.1
	6.2
	6.3
<b>GC7</b>	7.1
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<b>GC8</b>	8.1
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<b>GC9</b>	9.1
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<b>GC10</b>	10.1
	10.2
	10.3
<b>GC11</b>	11.1
	11.2
	11.3

**\*Index list provided in the Annex 1**

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SC03

**specializations**

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# HERITAGE REPROGRAMMING

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	5
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- ▶ Intensive Workshop
- Theory Course
- ▶ Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- Group work
- ▶ Supervision
- Master class

### Expected Prior Knowledge

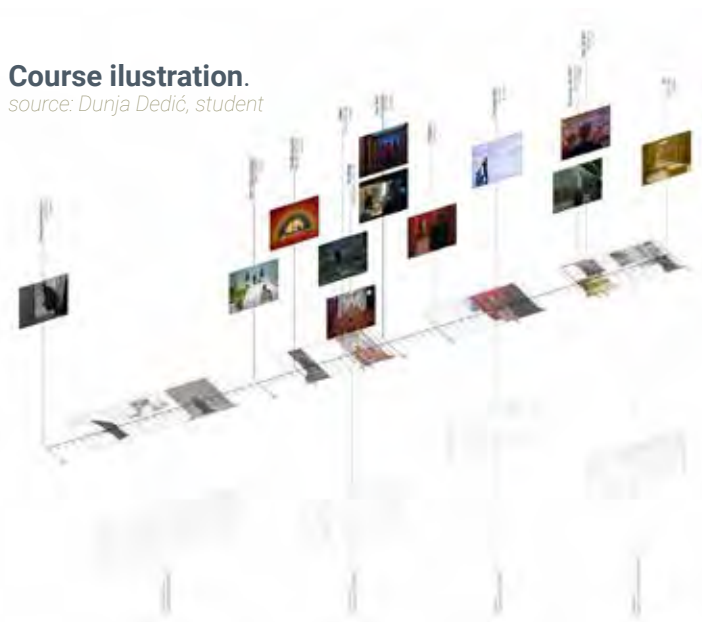
Understanding of basic concepts and principles regarding the notions of Urban Patterns and Cultural Heritage; High analytical and narrative capacity through the production of diagrams, schemes, infographics, storytelling, etc.

### Course objectives

This course introduces the methodological framework of heritage reprogramming (HRP) recognized as a growing, analytical and problem-based approach in the design process in which the subject of design/redesign is an entity of urban or architectural heritage. Through mastering the threefold content – context, approaches, and tools and techniques – students will develop: (1) operative knowledge about the main approaches of HRP and its contemporary state-of-the-art, (2) ability to place these approaches in their professional and experimental design context; (3) ability to apply different tools and techniques for analysis of built heritage, regarding its urban context and historical development, functionality, and technical development; (4) ability to recognise contemporary problems concerning urban and architectural heritage and apply problem-based approach in design process; (5) ability to create and present design solutions based on analysis and evaluation of context through value-matrix and diagramming; and (6) ability to justify critical point of view in discussions about the evaluation of heritage on different scales.

### Course illustration.

source: Dunja Dedić, student



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Urban Patterns
- Cultural Heritage

### HERITAGE TYPES

- Modern Heritage
- Urban Heritage
- Emerging Heritage

### DESIGN APPROACHES

- Heritage Reprogramming
- Multiscale Design Approach

### DESIGN ACTIONS

- Integral Heritage Protection
- Adaptive Reuse

### TOOLS

- Mapping, Documenting, Cataloguing
- Heritage Value Matrix

## ☰ Course Syllabus

In order to understand both the methodological and conceptual nature of the program, the content of HRP curricula will have a threefold perspective: (a) critical analysis and understanding of the context in which the methodology is developed, (b) understanding of architectural programming approaches, and (c) understanding of techniques and programming tools.

### THEORETICAL PART

CONTEXT - Technological arena: The origin of concepts and methods from information and computer systems; Socio-political arena: Creating the physiognomy of the urban landscape; Academic arena: Development of participation in the design process; and Practical arena: Development of design methods.

APPROACHES - Design-Based Architectural Programming; Knowledge-Based Architectural Programming; Agreement-Based Architectural Programming; and Value-Based Architectural Programming.

TOOLS AND TECHNIQUES - Value Matrix; and Diagramming.

### PRACTICAL PART

In order to understand the methodological nature of the HRP course will introduce Heritage Value Matrix (HVM) as a main research with its operative role in research by design process. Accordingly, the content of HRP curricula should have a two-fold perspective: (a) conceptualization of HVM, defining criteria and values, and structure for analysis, and (b) conducting an analysis on a reference case study for a heritage construct with special reference to modern and emerging heritage (which will act as a heritage of future). The content should be research oriented and students will be encouraged by the analytical process of analysis – synthesis:

- HVM conceptualization: Defining criteria and values, structuring the matrix, Graphical development of matrix - diagramming

- HVM development: Selecting relevant case study, Analysis – combining desk and on-site research, Development of matrix

### TEACHING METHODS

- Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- Design Project
- ▶ Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

Engaging all three listed content frameworks will provide a comprehensive understanding of the programming / reprogramming approaches and point to entirely new meanings regarding sustainability and heritage. These meanings will be primarily decoded in relation to functional reprogramming and the intention to make the most of the capacities of the inherited spatial framework and thus reduce the consumption of new resources for the construction or radical transformation of individual buildings or urban entities.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

Through recognizing all the features of the HRP approach, learning will include a combined teaching philosophy in order to achieve a high level of knowledge about HRP in the educational process: (1) problem-based approach with the ultimate goal to identify specific problem concerning built heritage and solve it through design (problem solving); (2) design-based philosophy makes a logical factor in the HRP education process primarily due to the nature of programming to conduct critical analysis, define design inputs, and enhance research by design approach. In order to achieve a high level of applicability understanding the HRP approach in the design process, the case study will be engaged - research on specific spatial polygons, locations and contexts. Contextual factors will represent the basic input parameters for reprogramming, which is why learning in a real environment and on concrete examples is of great importance for HRP.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- Design Project
- Presentation
- Technical report
- ▶ Research paper
- Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – State-of-the-art of Architectural Programming and Introducing its “RE” Nature
2	Thematic Lecture 1: Arenas of Architectural Programming
3	Thematic Lecture 2: Architectural Programming Genealogy
4	Thematic Lecture 3: Architectural Programming Models – Focusing Value-based Model
5	Case Study 1: Selecting relevant Case Study - How to select and how to approach case study?
6	Case Study 2: Preliminary Analysis – combining desk and on-site research
7	Case Study 3: Timeline – Genealogy of Heritage
8	Contextual Analysis 1: Defining criteria and values
9	Contextual Analysis 2: Clustering Information
10	Contextual Analysis 3: Visualization of Clusters
11	Value Matrix 1: Graphical Structure of Matrix - Diagramming
12	Value Matrix 2: Content Structuring in line with Matrix
13	Value Matrix 3: Overlapping Genealogy and Values
14	Explication – Research Paper
15	Explication – Research Paper

GC1	1.1
	1.2
GC2	1.3
	2.1
	2.2
GC3	2.3
	3.1
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GC4	3.3
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GC10	9.3
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GC11	10.3
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**\*Index list provided in the Annex 1**

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SC04  
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# MAPPING URBAN HISTORY

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	5
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- Theory Course
- ▶ Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- ▶ Group work
- Supervision
- Master class

### Expected Prior Knowledge

Solid knowledge of history of architecture and urbanism. Understanding of basic concepts and principles regarding the notions of Cultural and Collective Memory, Urban Narratives, Cultural Studies, Cultural Identity and Cultural Heritage.

### Course objectives

Course introduces key concepts, techniques, and practices of mapping as a tool of research and spatial analysis from the perspective of urban history within the broader interdisciplinary field of urban studies. Through the course processes of mapping as apparatus to recognize, document and understand cultural, political, economic, and spatial interactions within a distinctive built environment will be researched. Evolution and variety of maps and mapping techniques in different historical and comparative contexts is observed within the field of urban history, its methods, sources and ideas. Through series of lectures, assignments and in-class tasks students will critically engage in the process of mapping of urban history of a specific area/place by producing maps, atlases, catalogues and other visual representations for analytical and narrative purposes. The course will equip students with necessary interdisciplinary knowledge, analytical and research skills and prepare them for their independent research and design projects aligned with their specific disciplines and areas of expertise.

### Course illustration.

Bacup, Mrdjan Bajic, Museum of Contemporary art, Belgrade (2023)  
*Photo: Mladen Pešić*



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural and Collective Memory
- Urban Narratives
- Cultural Studies, Cultural Diversity
- Cultural Identity
- Cultural Heritage

### HERITAGE TYPES

- Modern Heritage
- Vernacular Heritage
- Tangible and Intangible Heritage
- Cultural Landscape
- Urban Heritage
- Emerging Heritage
- Documentary Heritage
- Natural Heritage

### DESIGN APPROACHES

- Heritage Reprogramming
- Historical Urban Landscape- HUL
- Multiscale Design Approach

### DESIGN ACTIONS

- Preventive Conservation
- Developing Cultural Routes and Itineraries

### TOOLS

- Image Rectification
- Space Syntax
- Morphogenesis Study
- Mapping, Documenting, Cataloguing
- Use of GIS Technology
- Collaborative Cartography
- Collaborative workshop – CHARRETTE
- Digitalization of Heritage

## ☰ Course Syllabus

### Theoretical part

First part of the course will examine maps as artefacts, as texts, as media while mapping will be addressed as a method and tool for selecting appropriate design principles and critical perspectives in various contexts. Multiple ways of understanding and using of maps simultaneously as conceptual device and tool in the processes of spatial analysis and argumentation within the design and planning process makes them of symbolic value that could be addressed through visualization, map interpretation, site-based storytelling, critical cartography etc. During the course students will have the opportunity to: a) study the history and develop personal methods of mapmaking; b) rethink, and understand maps and atlases as cultural artefacts, political, planning and narrative tools for spatial transformation; c) understand history (past) of built environment, present spatial relationship and future transformations.

### Practical part

Practical part of the course is implemented through generating (a) Atlas (as a collection of maps, diagrams, and cartograms), (b) Guide (manuals, recipes, etc.) and (c) Archive (documentation, database, indexes, etc.). Through mapping of the specific area trends in the history of urbanization and development will be described while specific historic and spatial factors in urban morphology will be identified and analysed.

### TEACHING METHODS

- Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- Design Project
- ▶ Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

During the course, students will learn how to analyse maps as social constructs that could be useful tool for visualization of abstract notions and processes. Urban history and historiography as contextual framework will be of great importance for discovering spatial narratives of specific places and locations.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

General teaching methodology will be information-oriented with historic and theoretic insights into existing definitions and practices of maps and mapmaking. Presentations will address theoretical and tacit knowledge with focus on different practices of transmedia storytelling and media archaeology. Technical and analytical drawings will be used as a part of archival research and conceptualization of the atlas. Visualization of already familiar and new notions related to heritage and sustainability of the built environment will be constituent part of all tasks and assignments.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- Case Studies
- Animation
- Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

1	Mapping heritage and sustainability in Urban history and historiography
2	History and origins of maps and mapping
3	Maps as artefacts, as texts, as media
4	Data visualization and information design
5	Current research and practices in mapping and data visualization
6	Urban history narratives / Narratives of Urban history
7	Critical approaches, practices and works in the field of mapping
8	Mapping, map interpretation, site-based storytelling, critical cartography
9	Pre examination activity / Project proposals presentation
10	Pre examination activity / Project proposals presentation
11	Atlases as cultural artefacts, political, planning and narrative tools
12	Archival narratives
13	Literature narratives
14	New horizons of mapping and Urban history
15	Wrap up

GC1	1.1
	1.2
	1.3
GC2	2.1
	2.2
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GC3	3.1
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GC7	7.1
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GC8	8.1
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GC9	9.1
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GC10	10.1
	10.2
	10.3
GC11	11.1
	11.2
	11.3

**\*Index list provided in the Annex 1**

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SC05

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# INDOOR ENVIRONMENTAL QUALITY IN HISTORICAL BUILDINGS - EVALUATION AND MONITORING

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	5
Exercises	1
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- ▶ Theory Course
- ▶ Seminar
- ▶ Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- Group work
- Supervision
- Master class

### Expected Prior Knowledge

Students are expected to have basic knowledge during the bachelor studies, and basic knowledge of 3d modelling software.

### Course objectives

The goal of the course is to introduce the term of Indoor Environmental Quality in buildings to students helping them understand how different decisions can influence indoor building conditions. Special focus will be on renovation process of historic buildings. Students will be presented with different tools and methods of evaluating indoor building conditions in different stages of buildings life cycle. By getting to know these techniques students will be able to evaluate microclimate conditions in heritage buildings as well as define different ways of improving both energy performance as well as and IEQ in existing buildings. Understanding the methods of evaluating and monitoring Indoor Environmental Quality in buildings students will be able to realize how and in what matter different decisions in desing and restoration processes can influence indoor conditions in buildings.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Bioclimatic design
- Energy efficient

### HERITAGE TYPES

- Vernacular Heritage
- Heritage sites
- Urban heritage
- Modern heritage

### DESIGN APPROACHES

- Environmentally Responsive Design
- Passive/Active Sustainable Design
- Environmentally Responsive Design
- Energy Conscious Design
- Climate Sensitive Design
- Thermal , Visual, Acoustic Comfort

### DESIGN ACTIONS

- Refurbishment/ Rehabilitation
- Microclimate improvement

### TOOLS

- Software simulation
- Microclimate simulation
- Thermal/Energy simulation
- Data logger
- Post occupancy evaluation

## ☰ Course Syllabus

Theoretical teaching introduces students with basic topics that are defined in this course: Indoor Environmental Quality, building life cycle, indoor building conditions monitoring and evaluation, and different tools and techniques; Practical teaching involves selecting a case study building that each of the students will explore and analyse using combined methodology – observation, analysis of theoretical framework and presentation. It is expected that each student maps current problems in building regarding IEQ and define/assume current IEQ conditions in building. After that students will give the recommendations for indoor conditions evaluation methods and propose interventions needed to upgrade conditions in existing building to improve conditions. For the final part of the work students will compare current state of IEQ in building and expected improvements of IEQ conditions in future building scenario.

### TEACHING METHODS

- Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- ▶ Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- Design Project
- ▶ Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

Working on the subject enables the understanding of the phenomenon of Indoor Environmental Quality focusing on historic buildings regarding theoretical and practical discourse, and allowing students wholesome knowledge base for future work and practice. Students will be challenged with understanding mechanism in which IEQ parameters mutually work and how they are influenced by different factors. IEQ will be demonstrated through building life cycle, and students will be able to understand benefits and consequences different design and maintenance decisions can have on IEQ in buildings. Students will be able to define and select optimal and appropriate methods and tools for building evaluation, further leading to understanding how different design and refurbishment proposals directly influence indoor building conditions

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

The course includes:

- ex-cathedra lectures,
- presentation and analysis of case studies and examples with discussion and active participation of students
- interactive work and consultations

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- ▶ Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- Design Project
- ▶ Presentation
- Technical report
- ▶ Research paper
- Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability, heritage and people and environment
2	Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, interview ....)
3	Key Challenges
4	Key Challenges
5	Practical skills 2
6	Pre examination activity / discussion assignment 1
7	Key framework and concepts
8	Key framework and concepts
9	Pre examination activity / case study
10	Key design strategies
11	Key design strategies
12	Practical skills 3
13	Pre examination activity / discussion case study
14	Case Study
15	Wrap-up lecture

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GC11	11.2
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**\*Index list provided in the Annex 1**

≡ LITERATURE

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Sofia Tonello

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# CONSERVATION AND PRESERVATION. INTERACTIONS BETWEEN THEORY AND PRACTICE

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	5
Exercises	1
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- Theory Course
- Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training

### Expected Prior Knowledge

To be eligible for admission to this course, students are expected to have acquired basic knowledge during the architecture-related bachelor studies (such as basic architectural and urban design comprehension and history of architecture).

### Course objectives

The course aims to provide students with knowledge of the main approaches and practices in the restoration field. The educational path is focused on enabling the student to acquire a good level of knowledge and understanding of the theoretical foundations, referencing the work of the masters and recent international charters in relation to cultural heritage.

The course aims to develop the student's critical skills concerning heritage awareness and the sustainability of cultural heritage.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural Heritage
- Cultural & Collective Memory
- Cultural Identity
- Cultural Enhancement
- Cultural studies, cultural diversity

### HERITAGE TYPES

- Tangible and Intangible Heritage
- Industrial Heritage
- Modern Heritage
- Monumental Heritage
- Archaeological heritage
- Heritage sites
- Documentary heritage
- Performative and Affective Heritage

### DESIGN APPROACHES

- Heritage Reprogramming
- Environmentally Responsive Design
- Historical Urban Landscape (HUL)
- Multiscale Design Approach

### DESIGN ACTIONS

- Preventive Conservation
- Conservation
- Restoration
- Regeneration
- Adaptive Reuse
- Consolidation
- Continued Use
- Rebuilding
- Refurbishment / Rehabilitation
- Temporary planning and Meanwhile spaces

### TOOLS

- Mapping, Documenting and Cataloguing
- Artistic approaches (photography, video, performance)
- Heritage Value Matrix
- Conservation Status Evaluation

## ☰ Course Syllabus

The theoretical course will consist of a first part developed through ex-cathedra lectures and a second part discussing the exercises proposed to the students.

The theoretical part will focus on the relationship between protection, conservation, and cultural vision through the thought of the masters and selected case studies.

Specifically, the lessons will focus on the following:

- the study of the work and thought of Eugene Emmanuel Violet Le Duc, Camillo Boito, John Ruskin, Alois Riegl, Gustavo Giovannoni, Ambrogio Annoni, Liliana Grassi, Roberto Pane, Cesare Brandi, Renato Bonelli
- the study of specific case studies selected by the lecturer;
- the reading of international charters from the point of view of protecting tangible and intangible cultural assets.

The second part will be devoted to the critical and interpretative analysis through the international charters of a contemporary project. The exercise will consist of the critical analysis of the case study chosen by the student from the perspective of the relationship between the project and the international charter.

### TEACHING METHODS

- ▶ Technical drawings
  - Analytic drawings (diagrams)
  - 3D modelling
  - Physical modelling
- ▶ Case Studies
  - Animation
  - Simulation
  - Rendering
- ▶ Specific international bibliography

### TEACHING FORMATS

- Design Project
- ▶ Presentation
  - Technical report
  - Research paper
  - Essay
  - Written Exam
  - Oral Exam
  - Other

### FORMS OF TEACHING

- Individual work
- ▶ Group work
  - Supervision
- ▶ Master class

### ▶ Demonstration of the syllabus coherence with the course objectives

Within the historical framework of restoration practice and theory, the course introduces the study of the discipline's thought, highlighting the fundamental role of critical restoration for the current project on architectural heritage.

The reading of international charters will promote the development of the student's critical attitude toward design choices and the development of an autonomous approach, in their professional future, during the management of the complexity of the contemporary project regarding the themes of conservation and restoration in the framework of the sustainability of the cultural heritage.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

The course includes:

- \_ Ex-cathedra introductory lectures.
- \_ Seminars with invited lecturers.
- \_ Case studies collective review sessions.

Ex-cathedra lectures will enable students to learn about theories and methodologies of heritage study and analysis that can be applied during the lectures with guest lecturers and in collective case study reviews. The opportunities for discussion with the teaching team and colleagues will help students develop a critical and autonomous vision of restoration theory and practice.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- Design Project
- ▶ Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- ▶ Oral Exam
- Other

## ▼ COURSE STRUCTURE

- 1 **Introduction lecture – linking sustainability, heritage, people and environment**
  - Course Introduction and Overview
  - Presentation of the historical path and main themes;
  - Expected learning outcomes presentation and methodology

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- 2 **Key framework and concepts 1**
  - Lecture on theories for cultural heritage

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- 3 **Key Challenges 1**
  - Lecture on selected and relevant case studies in restoration and conservation

---
- 4 **Key framework and concepts 2**
  - Reading of international charters in the perspective of tangible and intangible cultural heritage

---
- 5 **Pre examination activity 1 / discussion assignment 1**
  - Exercise: reading and interpretation of the selected case study proposed by the student related to international charters

---
- 6 **Pre examination activity 2 / discussion assignment 2**
  - Exercise: reading and interpretation of the selected case study proposed by the student related to international charters

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≡ LITERATURE

GC1	1.1
	1.2
GC2	1.3
	2.1
	2.2
GC3	2.3
	3.1
	3.2
GC4	3.3
	4.1
	4.2
GC5	4.3
	5.1
	5.2
GC6	5.3
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GC8	7.3
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GC9	8.3
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	9.2
GC10	9.3
	10.1
	10.2
GC11	10.3
	11.1
	11.2
	11.3

**\*Index list provided in the Annex 1**

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prepared by Mauro Marzo (Iuav),  
Viola Bertini (Sapienza Università di Roma)

SC07  
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# ARCHITECTURE AND HERITAGE TOURISM

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	4
Exercises	2
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- ▶ Theory Course
- Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- Group work
- ▶ Supervision
- Master class

### ▶ Expected Prior Knowledge

To be eligible for admission to this course, students are expected to have acquired knowledge on the meaning of heritage and on architectural design's history, methodologies, and theories.

### ▶ Course objectives

The main objective of the course is to provide students with the basic knowledge on the phenomenon of cultural and heritage tourism and the strategies that the architectural project, on its various scales, can introduce to ensure that the resources given by this type of tourism can assume an appropriate character with respect to the identities of places and the balance of contexts.

In particular, the course aims to solicit a reflection on

- the critical issues and potentials posed by tourist use of different types of heritage, focusing the discussion on the concept of sustainable tourism and referring to the main guideline documents elaborated in the international context (UNESCO, UNWTO, CETS, etc.);
- the role that architectural design - on the landscape, urban and building scale - can assume in the processes of tourist valorisation of heritage, paying particular attention to the relationships that exist between heritage assets and the contexts to which they belong;
- the planning actions to be implemented to allow heritage to be understood in its values and used by both the local and global community, i.e. by residents and visitors.

### Course illustration.

Concorso internazionale in unica fase Ambito piazza Carrara, Bergamo 2016. Working group: Mauro Marzo (team leader), Viola Bertini, Anhtu Breda, Nicola Fortunati, ing. Luigi Antonio Vialetto. View of the reshaped square



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural Heritage
- Cultural & Collective Memory
- Urban Narratives
- Cultural Identity
- Enhancement

### HERITAGE TYPES

- Modern Heritage
- Industrial Heritage
- Vernacular Heritage
- Tangible and Intangible Heritage
- Cultural Landscape
- Urban Heritage
- Monumental Heritage
- Archaeological heritage
- Heritage sites
- Natural Heritage

### DESIGN APPROACHES

- Heritage Reprogramming
- Recycling / Upcycling
- Community Building and Representation
- Historical Urban Landscape
- Design for all in Cultural Heritage
- Multiscale Design Approach

### DESIGN ACTIONS

- Re-planning
- Regeneration
- Renovation
- Adaptive Reuse
- Continued Use
- Refurbishment / Rehabilitation
- Musealization
- Developing Cultural Routes and Itineraries

### TOOLS

- Topographical Surveys
- Space Syntax
- Morphogenesis study
- Mapping, Documenting and Cataloguing
- Artistic approaches (photography, video, performance)

## ≡ Course Syllabus

The course consists of a theoretical part and an operational component.

The theoretical part is articulated into four ex-cathedra lessons focused on the relationship between architectural design and heritage tourism. In particular, the lessons address:

- the concepts of cultural tourism, heritage tourism and sustainable tourism;
- the main policy tools and guidelines at European and international level for the management of tourism in heritage sites;
- the potential and critical issues related to the tourist use of heritage, discussed through the presentation of case studies (cities of art and overtourism, minor heritages and marginal areas, UNESCO sites, cultural landscapes, etc.).
- the role of architectural project for the enhancement and local and global use of heritage, articulated through the presentation of architectural projects that address, on different scales, the main themes posed by different types of heritage (the access to iconic places of heritage, the understanding and use of archaeological sites, the design of itineraries in the landscape, etc.).

The operational part consists in the development of a paper by each student, which will be discussed in terms of contents and method with the teacher. The subject of the paper is the critical-interpretative reading of a contemporary architectural project created and conceived with the aim of enhancing and promoting the tourist use of a given asset or heritage site. The student will be required to analyse: the tourist dynamics affecting the area in which the project is located; the relationships that exist between the project, the patrimonial element, and the context to which it belongs; the functional program and the design theme; the compositional principles and the ways in which the project reinterprets the characteristics of the place and of the patrimonial asset with which it is related.

### TEACHING METHODS

- Technical drawings
- Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- Design Project
- ▶ Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

Through the transmission of a theoretical knowledge and the examination of case studies, the course is aimed both at developing critical awareness of the role that the architectural project can assume in the processes of valorisation and tourist use of heritage, and at transferring the basic operational and methodological knowledge necessary to design in this broad context of knowledge.

The main goal of the course is in fact to develop in the student and future designer an analytical/design approach that allows for responding to the complexity of the relationships posed by this tourist phenomenon in relation to the specificity of landscapes, cities and architectural artefacts, to the delicate balance between protection and enhancement of heritage, to the needs expressed by territories and their inhabitants.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

The course includes:

Theoretical lessons which have the dual purpose of:

- providing students with basic knowledge about the phenomenon of heritage tourism and the implications posed by the tourist use of heritage (criticalities/resources, over/under tourism, inhabitants/tourists, valorisation/use/protection, etc.);
- illustrating and discussing a repertoire of case studies which, on different scales and in relation to different types of heritage, shape possible actions, strategies, and methodologies of the architectural project in relation to the enhancement and tourist use of heritage.

The exercise has as objective the student's understanding of the questions posed by the tourism phenomenon in relation to the characters and specificities of places and the possible operational responses offered by the architectural project to these issues.

# METHODOLOGY

## ASSESSMENT METHODS

- Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- Design Project
- Presentation
- Technical report
- ▶ Research paper
- Essay
- Written Exam
- ▶ Oral Exam
- Other

## ▼ COURSE STRUCTURE

- 1 **Lecture 1 | Introduction lecture**
  - The concepts of cultural tourism, heritage tourism, sustainable tourism.
  - Managing tourism in relation to heritage: documents and guidelines at the European and international level

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- 2 **Lecture 2 + Assignment of the exercise**
  - Potentials and criticalities posed by tourist use of heritage. Case studies
  - Choice, in accordance with the teaching, of a case study to be critically analysed.

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- 3 **Lecture 3**
  - The role of architectural design in tourist valorisation and use of heritage.
  - Case studies: cities of art | iconic and monumental complexes | Unesco sites | archaeological areas

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- 4 **Discussion of the assignment**
- 5 **Lecture 4**
  - The role of architectural design in tourist valorisation and use of heritage.
  - Case studies: minor and vernacular heritage | marginal areas | cultural landscapes and natural sites

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- 6 **Final discussion of the assignment**

GC1	1.1
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GC2	1.3
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GC3	2.3
	3.1
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GC4	3.3
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GC9	8.3
	9.1
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GC10	9.3
	10.1
	10.2
GC11	10.3
	11.1
	11.2
	11.3

**\*Index list provided in the Annex 1**

☰ LITERATURE

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2. Bourdeau, L., Gravari-Barbas, M. & Robinson, M. E. (eds.). (2017). *World heritage sites and tourism: global and local relations*. Routledge.
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# SCENARIO PLANNING

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	4
Exercises	2
OFL	
SRW	
Other	

### COURSE TYPES

- ▶ Design Studio
- ▶ Intensive Workshop
- ▶ Theory Course
- Seminar
- Laboratory work
- Research Thesis
- ▶ Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- Group work
- Supervision
- Master class

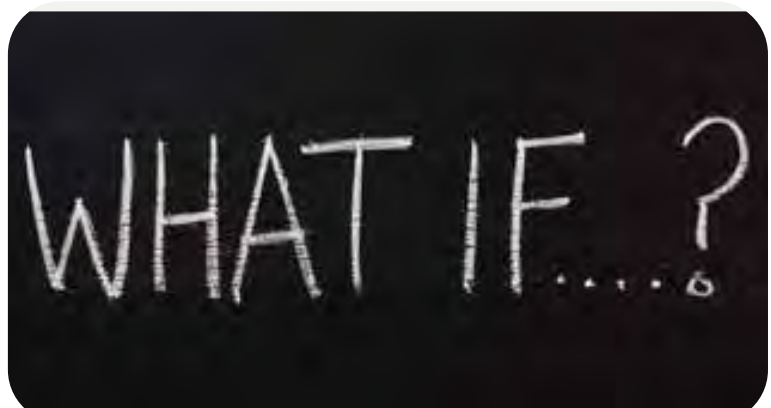
### Expected Prior Knowledge

The course is open to students of the Master's degree programmes in architecture, urbanism and landscape architecture. It is expected that students have the knowledge from GIS-based planning support system (PSS) as well as a high analytical and narrative capacity through the production of diagrams, schemes, concepts, infographics, storytelling, etc.

### Course objectives

The future of our cities will be shaped by decisions being made today, as well as uncertain challenges like climate change, new technologies, economic shifts, and changing demographics. Education and research should be combined to analyze, theorize and construct future cities/landscapes and a better living environment. The course is therefore intended as a think-tank and research lab/platform exploring alternative possibilities for the development of our cities in particular and of our inhabited landscapes in general, by focusing on the production of analysis, models and visualizations for multiple future scenarios, even conflictual or extremes. The course investigates within the given world and produces future scenarios beyond it; from general to specific and global to local. It envisions, proposes and constructs hypothetical societies, cities and landscapes, thus acting as a future scenario making machinery in order to steer towards desirable perspectives and prepare for what lies ahead. The goal of scenario planning is to make better plans and decisions by challenging stakeholder assumptions and encouraging learning. The course findings are therefore discussed with and communicated to a broad public in a variety of ways, including exhibitions, publications, workshops, and panel discussions.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural&Collective Memory
- Resilience
- Urban patterns
- Heritage Genealogy

### HERITAGE TYPES

- Modern Heritage
- Industrial Heritage
- Vernacular Heritage
- Performative and Affective Heritage
- Tangible and Intangible Heritage
- Cultural Landscape
- Urban Heritage
- Monumental Heritage
- Emerging Heritage
- Documentary Heritage
- Archaeological Heritage
- Heritage Sites
- Natural Heritage

### DESIGN APPROACHES

- Heritage Reprograming
- Environmentally responsive design
- Energy Conscious Design
- Climate Sensitive Design
- Whole-Lifecycle Design
- Carbon Neutral Design
- Passive/Active Sustainable Design
- Community Building and Representation
- Renewable Energy Integration
- Historical Urban Landscape- HUL
- Green Blue Infrastructure

### DESIGN ACTIONS

- Redevelopment
- Adaptive Reuse
- Consolidation
- Nature Based Solutions
- Public Advocacy for Social Participation
- Circular Economy
- Developing Cultural Routes and Itineraries

## ≡ Course Syllabus

The course introduces students to the scenario planning technique, as well as provide hands-on experience using qualitative and GIS-based planning support systems (PSS) used to implement scenario planning.

The course contains four modules: (1) an overview of scenario planning theory and concepts, (2) a discussion of the main approaches to use these ideas in urban and landscape planning and design, (3) an examination of some of the modeling tools used for scenario planning, and (4) an opportunity to use leading planning support systems (PSS) tools to construct and analyze scenarios.

The course will involve readings, discussion, and a series of individual and group assignments which culminate in detailed student-generated scenarios for sites and case studies identified by the instructors at the beginning of the course. The applicative part of the course could also be intended as an opportunity for in-depth analysis regarding the case studies chosen from istructors of the Illrd semester elective Design Studio or as a theoretical-practical work aimed at the thematization of the final deg ee thesis. In the latter case, students (individually or in group) will propose a case study considered significant o be explored with the final deg ee thesis work.

The course findings will be discussed with and communicated to a broad public in a variety of ways, including exhibitions, publications, workshops, and panel discussions.

Students will work individually or in groups and will produce one single presentation at the end of the course.

During the course, several interviews with the instructors will take place so as to evaluate both the individual student's and/or group's progress.

By the end of the course, students will:

- > develop knowledge and skills to be reflecti e practitioners who draw on scenario techniques appropriately to foster urban/ landscape progress through effective planning practice;
- > have knowledge derived from hands-on experience of a variety of qualitative and quantitative techniques used by scenario planners to analyze trends, construct scenario narratives, and model scenarios using GIS tools, diagrams, schemes, concepts, infographics, storytelling, etc.

### TOOLS

- Space Syntax
- Morphogenesis Study
- Mapping, Documenting, Cataloguing
- Use of GIS Technology
- Collaborative Cartography
- Artistic approaches (photography, video, performance)
- Simulations and Monitoring
- Communication of the outcomes

### TEACHING METHODS

- Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- Animation
- ▶ Simulation
- Rendering
- Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- ▶ Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

The course consists of two main parts. The first is aimed at acquiring basic notions and techniques on scenario planning. The second part, basically practical, is aimed at designing different scenarios for a specific case study or topic.

Basic assumptions and formulated hypotheses will be discussed with a large audience during specific meetings and events, in the belief that the construction of scenarios should be seen as a continuous adaptation and learning process. Students will be led to strengthen their reflective practices as the ability to reflect on one's actions so as to take a critical stance or attitude towards one's own practice and that of one's peers (Schön, 1983).

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

Students will acquire an important ability in the application of scenario planning and drawing techniques. Accordingly, they will be encouraged to use both qualitative and GIS-based planning support systems (PSS).

A wide range of materials and contributions will be provided them during the course duration. Beyond the general literature, an extensive bibliography will be discussed, prepared and implemented step by step according to the case studies and thematic/theoretical contents chosen and developed by students/groups. Concrete examples of policies and plans imagined or implemented for the future of our cities and territories will be suggested.

Students will work with cartographic materials, interviews, field works and will be led to discuss and negotiate their ideas through specific meetings with stakeholders, technicians and experts specifically involved during the course.

The theses supported and the planning results will be communicated (and consequently discussed) to a large audience in a variety of ways, including exhibitions, public presentations, small brochures, etc.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- ▶ Written Exam
- ▶ Oral Exam
- ▶ Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability, heritage and people and environment
2	Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, interview ....)
3	Key Challenges
4	Key Challenges
5	Practical skills 2
6	Pre examination activity / discussion assignment 1
7	Key framework and concepts
8	Key framework and concepts
9	Pre examination activity / case study
10	Key design strategies
11	Key design strategies
12	Practical skills 3
13	Pre examination activity / discussion case study
14	Case Study
15	Wrap-up lecture

GC1	1.1
	1.2
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GC2	2.1
	2.2
	2.3
GC3	3.1
	3.2
	3.3
GC4	4.1
	4.2
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\*Index list provided in the Annex 1

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prepared by Emanuela Sorbo and  
Gianluca Spironelli

SC09  
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# DIGITAL HUMANITIES AND DIGITAL KNOWLEDGE FOR THE PRESERVATION OF CULTURAL HERITAGE.

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	4
Exercises	2
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- ▶ Theory Course
- Seminar
- ▶ Laboratory work
- Research Thesis
- ▶ Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- ▶ Group work
- Supervision
- Master class

### Expected Prior Knowledge

To be eligible for admission to this course, students are expected to have acquired basic knowledge during the architecture-related bachelor studies (basic knowledge of survey methodologies and 3d modelling).

### Course objectives

The main educational goal of the course is to achieve students' autonomy in representing the information associated in a built cultural heritage throughout its life cycle. During the course, students will acquire the technical skills and the cultural tools for developing an informative model system that concerns an interpretive, material and constructive reading of a building to characterize its conservation status within a preservation horizon. Lectures and applied exercises will stimulate students' multidisciplinary investigation attitude through three-dimensional representation. Students will deal with a built case study of abandoned buildings or ruins considering three fundamental moments: the historical-critical analysis of the sources, the evaluation of the conservation status through surveys and the identification of possible design actions. The proposed activity will provide the students with the tools to develop an applied methodology for future professional activities.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural Heritage
- Cultural and Collective Memory

### HERITAGE TYPES

- Modern Heritage
- Industrial Heritage
- Vernacular Heritage
- Monumental Heritage
- Emerging Heritage
- Archaeological heritage
- Military Heritage

### DESIGN APPROACHES

- Whole-Lifecycle Design

### DESIGN ACTIONS

- Preventive Conservation
- Conservation
- Restoration
- Consolidation
- Heritage Management MG

### TOOLS

- Photogrammetry
- Topographical Surveys
- Data Logger
- Laser Scanning
- As-Built / As-Found Recording
- Mapping, Documenting and Cataloguing
- Historic Building Information Modelling - HBIM
- Conservation Status Evaluation
- Digitalization of Heritage

## ☰ Course Syllabus

The course proposes a cultural and operative approach to defining a knowledge system for the conservation status of a built Cultural Heritage.

According to specific ontologies and semantic discretization processes, students will be able to construct a digital transposition of the built heritage to time. Starting from the built heritage model, they will connect historical information to the elements of the building and recreate the historical transformation. The final output of the course will be an as-built model deferred over time and based on a critical reading of the character of the building (process scan-to-bim).

The students will deal with theoretical and critical thinking focused on evaluating existing architecture's conservation status (from the perspective of conservation design outlines). The applied component of the course will be developed using Autodesk Revit, BIMvision, and CloudCompare software. The examination will consist of an interview based on the assignments produced during the course.

Specifically, the teaching activities will focus on two levels:

- the introduction to an operative methodology based on the critical approach and a flexible theoretical framework;
- the drawing of architecture as a common language across cultures and disciplines.

### TEACHING METHODS

Technical drawings  
Analytic drawings (diagrams)

- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Specific international bibliography

### TEACHING FORMATS

Design Project  
Presentation

- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- ▶ Written Exam
- ▶ Oral Exam
- ▶ Other

### ▶ Demonstration of the syllabus coherence with the course objectives

Through the transmission of theoretical knowledge and the work on an applied case study, the students will be able to develop a critical awareness of the digital tools in conservation design strategies.

The proposed activities on cultural heritage interpretation help students to acquire a method of analysis concerning cultural heritage preservation and transmission. Specifically, the teaching activities will deal with a critical approach to the restoration theory and the digitalisation tools to develop a common graphic language for architecture across cultures and disciplines. Then, the critical approach and the flexible theoretical framework of the study method provide students with an applicative methodology for an analysis of the built heritage and allow the student to insert their creativity in the interpretation and design strategies.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

The course includes:

- Ex-cathedra lectures.
- Laboratory-type revision activities.
- Workshop sessions.
- Seminars with invited lecturers

Those teaching activities will promote a methodology of study and analysis for a critical approach to cultural heritage. The presence of operative moments of dialogue through seminars and thematic workshop sessions aimed at defining an interdisciplinary and cultural attitude on the topics of built cultural heritage. Finally, the introduction of scheduled presentations to promote students' interaction with different points of view on the same topic of investigation and a critical discussion on the progress of the work within the course.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings  
Analytic drawings (diagrams)
- ▶ 3D modelling  
Physical modelling
- ▶ Case Studies  
Animation
- ▶ Simulation  
Rendering  
Other

## ASSESSMENT FORMATS

- Design Project
- ▶ Presentation
- ▶ Technical report  
Research paper  
Essay  
Written Exam
- ▶ Oral Exam  
Other

## ▼ COURSE STRUCTURE

- 1 **Introduction lecture**  
Course introduction - Case study presentation (seminar with invited lecturers)

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- 2 **Practical skills 1**  
Data systematization - From geometrical models to constructive models.  
**Key Challenges 1**  
The role of historical-critical analysis of the sources /  
**Assignment 1**  
Individual critics

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- 3 **Key Challenges 2**  
Management systems and tools for preventive conservation  
**Assignment 2**  
Workshop sessions. Critical reading of the character of the building.

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- 4 **Pre examination activity 1**  
Collective critics

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- 5 **Practical skills 2**  
Data query and interoperability  
**Key Challenges 3**  
The IFC schema

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- 6 **Pre examination activity 2**  
Assignment discussion

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Odysseas Kontovourkis

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# SPECIAL TOPICS ON RECORDING AND DOCUMENTING HISTORIC BUILDINGS

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	5
Exercises	5
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- Theory Course
- Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- Individual work
- Group work
- Supervision
- Master class

### Expected Prior Knowledge

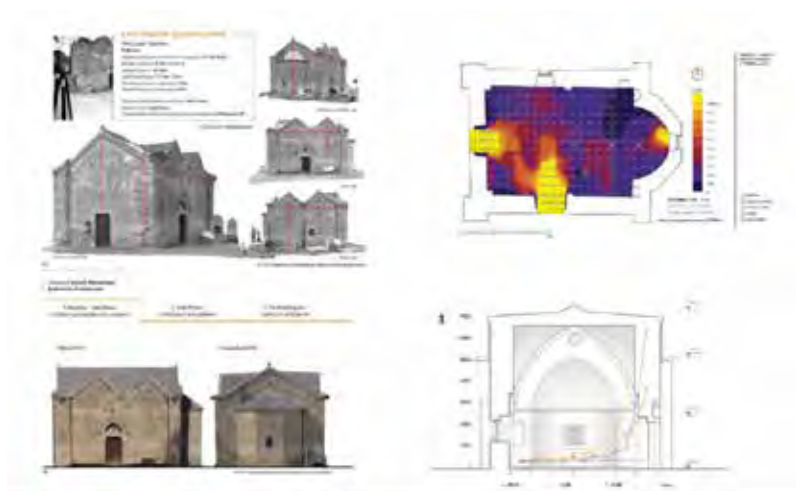
Eligible applicants are individuals who have basic knowledge for the documentation of historic buildings and approaches for their historic study. Knowledge of traditional methods of documentation, photogrammetry and digital methods of recording is useful but in the framework of the course students will become familiar with the various tools.

### Course objectives

The course aims at introducing research documentation tools and methodological approaches of in-situ recording and documenting of buildings, as well as individual structural and morphological building elements, while it includes methodologies for the classification, valuation and processing of monitoring data. The goal of the course is the comprehensive interdisciplinary training of students for the holistic documentation of cultural heritage (architectural layout, environmental behaviour). It also aims to get students familiar with the environmental evaluation of historic buildings and provide them with the experience to study and evaluate the thermal and lighting condition inside the buildings.

The course aims to provide them with the practical experience and know-how in dealing with the documentation, study and analysis of historic buildings using traditional and digital tools in order to fulfil the current needs for documentation and analysis on historic buildings in the private and public sector.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural heritage
- Cultural Identity
- Cultural Enhancement

### HERITAGE TYPES

- Architectural heritage (Industrial heritage, Modern heritage, Vernacular heritage)
- Monumental Heritage
- Documentary Heritage

### DESIGN APPROACHES

- Environmentally Responsive Design
- Passive/Active Sustainable Design

### DESIGN ACTIONS

- Conservation
- Restoration
- Consolidation
- Refurbishment/ Rehabilitation

### TOOLS

- Mapping, documenting, cataloguing
- Collaborative workshop
- Digitalization of heritage

## ☰ Course Syllabus

The course provides fundamental and specialized knowledge of recording and documenting historic buildings through the use of traditional/conventional and contemporary digital methods and tools. It introduces technologies that address issues of spatial organization, morphology and construction of buildings as well as their 3D representation and documentation in the digital environment. It also addresses the recording and analysis of environmental comfort conditions and energy efficiency of buildings and the recording of external environmental data. Among others, it addresses the recording of operational characteristics and / or specific comfort requirements of the buildings in question and includes the quantitative recording and analysis of parameters for determining thermal and visual comfort conditions.

The course consists of three individual parts. The first part includes the use of traditional tools during documentation, the second part the use of digital tools and the third part the environmental assessment of the building under study.

In particular, this course gives students the opportunity to become trained and acquire the tools and methods for documentation and recording (using traditional and contemporary digital measuring instruments) and systematic data analysis. Thus, students explore issues of digital recording and three-dimensional renderings.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling  
Physical modelling
- ▶ Case Studies  
Animation  
Simulation  
Rendering  
Specific international bibliography

### TEACHING FORMATS

- Design Project
- Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

Development of a methodology for the holistic documentation of historic buildings including not only the architectural and structural elements and layout but at the same time the environmental behaviour of the building.

Acquiring background knowledge and developing tools for in-situ recording of building blocks, buildings and structures (recording in data sheets, use of traditional and contemporary measuring instruments).

Development of a methodology for the study of details of individual constructions with special equipment.

Acquiring knowledge to record damage and alterations in constructions as well as processing and evaluating the data.

Deepening students' knowledge in the subject of environmental design of buildings, in recording and analysing comfort and energy performance conditions of buildings and recording outdoor environmental and indoor environmental data.

Deepening in issues of digital processes for recording and documenting buildings and building sites. In particular, the students will be able to understand and investigate advanced computational/digital mechanisms and technologies such as 3D scanning, 3D modelling, etc.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

- Face to face
  - Lectures / Tutorials / Field work
  - Presentations / lectures in class by lecturers and analysis of relevant articles and reports by students,
  - In situ visits, documentation and discussion
  - Recording and documenting of the building: recording with the use of traditional and contemporary measuring instruments (laser meter, meter, 3d scanner etc.)
  - 3D modelling of the building: photogrammetry software - photoscan, 3D modelling software.
- Environmental investigation – USB data loggers – recording
- temperature and moisture, lighting measurements, CO2 assessment, environmental station.
  - Projects assessment - feedback - interim and final presentations in class of projects to be developed

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)  
3D modelling  
Physical modelling
- ▶ Case Studies  
Animation  
Simulation
- ▶ Rendering  
Other

## ASSESSMENT FORMATS

- Design Project
- ▶ Presentation  
Technical report  
Research paper
- ▶ Essay
- ▶ Written Exam  
Oral Exam  
Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability and heritage
2	Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, visit to the case study)
3	Key Challenges – Methods of Documentation using traditional tools
4	Key Challenges – Methods of Documentation using digital tools
5	Practical skills 2 / Documentation of the case study
6	Pre examination activity / discussion assignment 1 – documentation of the case study
7	Key framework and concepts – preparation of drawings – plans, sections, renderings
8	Key framework and concepts – preparation of 3d of the building
9	Pre-examination activity / case study – discussion and feedback for the documentation drawings
10	Key design strategies – environmental assessment of historic buildings
11	Key design strategies – documentation of the environmental elements of historic buildings
12	Practical skills 3 – preparation diagrams for the environmental assessment of the historic buildings
13	Pre-examination activity / discussion of the drawings and the diagrams of the historic building
14	Case Study – presentation of the whole project for feedback
15	Final comments for the project

<b>GC1</b>	1.1
	1.2
	1.3
<b>GC2</b>	2.1
	2.2
	2.3
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<b>GC11</b>	11.1
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# REHABILITATION AND ADAPTIVE REUSE IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	3
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- Theory Course
- Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- Individual work
- Group work
- Supervision
- Master class

### Expected Prior Knowledge

Creativity; technical knowledge on survey (traditional and digital tools), analytical, and visualization skills

### Course objectives

The course aims at introducing students to the opportunities offered by the adaptive reuse of buildings / settlements in the context of sustainable development. The course starts with an introduction and definition of the pillars of sustainability, examining the environmental, economic, social and cultural parameters of sustainability.

The latter part includes an introduction of basic parameters that pertain to sustainable development as aspects that augment responsible and appropriate urban design. Each of these parameters is addressed in terms of the four pillars mentioned above and case studies are included to augment an understanding of these tools in terms of their practical application.

The knowledge gained from going through the paces of the presentations above leads to the formulation of a toolkit of actions that may address strategic objectives for rehabilitation and adaptive reuse in the context of sustainable urban design and development.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Rehabilitation
- Adaptive reuse
- Additions / Infill

### HERITAGE TYPES

- Architectural heritage (Industrial heritage, Modern heritage, Vernacular heritage)
- Monumental Heritage
- Documentary Heritage

### DESIGN APPROACHES

- Environmentally Responsive Design
- Passive/Active Sustainable Design

### DESIGN ACTIONS

- Conservation
- Restoration
- Consolidation
- Refurbishment/ Rehabilitation

### TOOLS

- Mapping, documenting, cataloguing
- Collaborative workshop
- Architectural Analysis / Synthesis

## ☰ Course Syllabus

The syllabus is split into ten lectures, three exercises, one midterm presentation and one final presentation. The first two lectures offer a general background on the definition of various terms and principles utilized in the coursework and placed in a historical framework tracking their evolution.

The next eight lectures are thematic in character and they examine issues pertaining to a sustainable approach to rehabilitation and adaptive reuse. The first lectures examine the benefits for tapping into existing infrastructures such as district energy, water provision, sewerage disposal and connections to existing public transit stops and routes.

The latter lectures examine technical, material and economic matters associated with the rehabilitation and adaptive reuse of buildings and settlements at a variety of scales. Actions include restorative works, insulation, building additions and new constructions that complement and enhance existing building stock.

## TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography

## TEACHING FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ **Demonstration of the syllabus coherence with the course objectives**

The syllabus coherence and course objectives are examined through three exercises and two presentations. The exercises include metrics such as the profiling of users that will help in the adaptation of existing stock for new proposed uses. This part also includes the formulation of architectural programming that will serve future needs.

The next exercise has to do with development scenarios and the identification of stakeholders. The position of parties and entities that may be involved in the development process is examined through a negotiation exercise that encourages role play given a general background to a related hypothetical situation and the assumption of positions that will allow students a realistic negotiating position in relations to other stakeholders. This exercise will lead to the formulation of a development scenario.

The last exercise has to do with an understanding of techno-economic and fiscal parameters associated with the process of rehabilitation and adaptive reuse. Real estate pro-forma sheets are used with return measures that may indicate project viability and long-term fiscal sustainability.

All the above are used as primers that will inform the design proposal that will be evaluated through a panel of critics – both internal and external – that will make suggestions in the interim review and will also examine progress and demonstration of syllabus objectives in the final project proposal.

### ▼ **Demonstration of the teaching methodologies coherence with the course objectives**

- In-class and remote formats
- Lectures / guest presentations / metrics tutorials
- Presentations / lectures in class by lecturers and text analysis by students,
- Field work and case study / on-site visits
- Excel tutorials for back-of-the-envelope calculations and
- Sketch-Up tutorials for quick massing studies and for the modelling of the final project proposal.
- Literature review of pertinent material and reference search tutorials for supporting literature and the finding the utilization of comparable case studies.
- Projects assessment and feedback in terms of structured midterm and final reviews with an interdisciplinary panel of guest critics.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- Physical modelling
- Case Studies
- Animation
- Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – Rehabilitation and adaptive reuse in the framework of sustainable development
2	Introduction and Key points of reference in sustainable development
3	Exercise one / quiz one
4	Development control and correlation of uses
5	Key Challenges in housing and population issues
6	Introduction to sustainable urban design principles
7	Exercise two / quiz two
8	Midterm review
9	Bioclimatic architecture; energy concerns and appropriate use of materials and methods of construction
10	Key challenges – infrastructural networks management: energy, water provision, sewerage management, mass transit
11	Exercise three / quiz three
12	Environmental protection and restoration; ecosystem strengthening and enrichment
13	Justice and environmental legislation for sustainable planning
14	Cyclical economy; green economics; economic development
15	Review of final project proposal

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# ENVIRONMENTAL BUILDING DESIGN

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	5
Exercises	5
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- Theory Course
- Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- Individual work
- Group work
- Supervision
- Master class

### Expected Prior Knowledge

Eligible applicants are individuals who have basic knowledge for bioclimatic design

### Course objectives

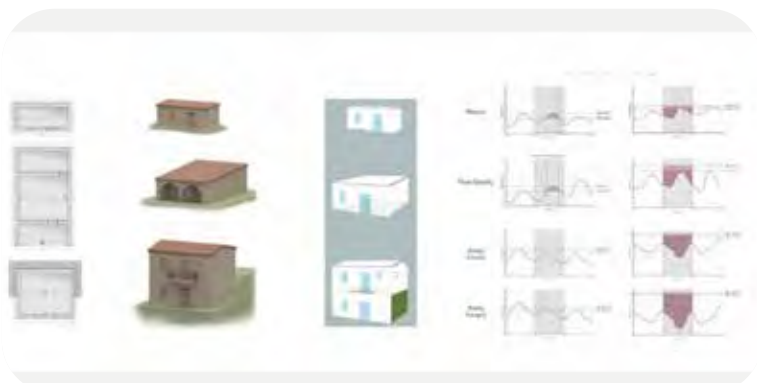
The course covers issues of Bioclimatic Architecture concerning the improvement of total comfort conditions of users – thermal, visual, acoustic comfort, air quality – in the indoor built environment, issues of energy design referring to the minimization of energy consumption of the building envelope (thermal insulation, appropriate technical support systems, monitoring and energy management systems of buildings) as well as issues of ecological construction regarding the minimization of the ecological footprint (recycling, reuse, embodied energy and CO2 emissions).

This course aims to deepen the theoretical and applied knowledge of students in the object of Environmental Design of Buildings and highlight the role of architectural design, construction and appropriate technical support in ensuring proper living conditions, in minimizing energy consumption and reducing adverse environmental impacts.

Finally, it seeks to develop criteria for the utilization of appropriate strategies (bioclimatic, energy planning and ecological building), with the aim of creating a holistic perception in the environmental design approach.

In the framework of this course lectures, as well as implementation and presentation of projects prepared by students are carried out.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Bioclimatic design
- Energy efficient
- Ecological footprint

### HERITAGE TYPES

- Vernacular dwellings
- Historic buildings
- Buildings of the modern movement

### DESIGN APPROACHES

- Environmentally Responsive Design
- Passive/Active Sustainable Design

### DESIGN ACTIONS

- Refurbishment/ Rehabilitation

### TOOLS

- Collaborative workshop
- Software simulation

## ≡ Course Syllabus

### Lecture Series Presentation

Presentation of a series of lectures referring to the theoretical background of the environmental design of buildings and the presentation - analysis of applications of bioclimatic design, energy studies and simulation studies of comfort parameters and environmental indicators.

Specifically, bioclimatic architecture is related to the application of a series of architectural design strategies referring to passive heating (direct solar gains, thermal mass, heat loss containment spaces) and cooling (sun protection, through cooling), to ensuring natural lighting (adequate internal and external openings, roof openings) and in the improvement of the microclimatic data of the immediate environment (proper planting, evaporative cooling).

Secondly, the course deals with energy planning which refers to the minimization of the energy consumption of the building shell.

It mainly refers to the construction options to ensure appropriate thermal insulation protection of the external envelope (thermal insulating glazing and aluminum cross-section technologies, thermal facade systems, roof thermal insulation techniques, etc.), to the use of the appropriate technical support systems for air conditioning (heating, cooling, artificial ventilation and lighting) and in the installation of advanced monitoring, control and technical management systems of the support systems (BMS, sensors, automations, etc.).

Thirdly, the course deals with the ecological building in design which refers to the minimization of the ecological footprint of the building, during the stages of collection and transport of materials, construction of the building, operation, maintenance and its disposal.

### Preparation of Design Exercise

Elaboration of a design exercise that aims to directly connect theoretical training with architectural practice. Specifically, the architectural design of a small-scale bioclimatic building envelope, integration of appropriate support systems - RES systems and use of appropriate materials and building techniques are proposed.

## TEACHING METHODS

- Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- ▶ Simulation
- Rendering
- Specific international bibliography

## TEACHING FORMATS

- Design Project
- ▶ Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ **Demonstration of the syllabus coherence with the course objectives**

Development of a methodology for the study of specific environmental parameters.

Deepening students' knowledge in the subject of environmental design of buildings, in recording and analysing comfort and energy performance conditions of buildings and recording outdoor and indoor environment data.

### ▼ **Demonstration of the teaching methodologies coherence with the course objectives**

- Face to face
- Lectures/ Workshop
- Teaching is mainly carried out through lectures and presentations by lecturers.
- An important aspect of the course is the project carried out by the students. During the semester, students give presentations of their projects.

## METHODOLOGY

### ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- ▶ Simulation
- ▶ Rendering
- Other

### ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability, heritage and people and environment
2	Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, interview ....)
3	Key Challenges
4	Key Challenges
5	Practical skills 2
6	Pre examination activity / discussion assignment 1
7	Key framework and concepts
8	Key framework and concepts
9	Pre examination activity / case study
10	Key design strategies
11	Key design strategies
12	Practical skills 3
13	Pre examination activity / discussion case study
14	Case Study
15	Wrap-up lecture

## ≡ LITERATURE

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## LEARNING OUTCOMES

<b>GC1</b>	1.1
	1.2
	1.3
<b>GC2</b>	2.1
	2.2
	2.3
<b>GC3</b>	3.1
	3.2
	3.3
<b>GC4</b>	4.1
	4.2
	4.3
<b>GC5</b>	5.1
	5.2
	5.3
<b>GC6</b>	6.1
	6.2
	6.3
<b>GC7</b>	7.1
	7.2
	7.3
<b>GC8</b>	8.1
	8.2
	8.3
<b>GC9</b>	9.1
	9.2
	9.3
<b>GC10</b>	10.1
	10.2
	10.3
<b>GC11</b>	11.1
	11.2
	11.3

**\*Index list provided in the Annex 1**

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prepared by Maria Philokyprou and  
Stavroula Thravalou

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# ENVIRONMENTAL FEATURES OF VERNACULAR ARCHITECTURE - DOCUMENTATION AND ASSESSMENT

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	5
Exercises	3
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- ▶ Theory Course
- Seminar
- Laboratory work
- Research Thesis
- ▶ Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- Group work
- Supervision
- Master class

### Expected Prior Knowledge

Eligible applicants are individuals who have basic knowledge for the documentation of vernacular settlements and dwellings and approaches for their study and documentation.

Creativity; technical knowledge on survey, communication, analytical, and visualization skills (integral protection approach)

### Course objectives

Main objectives

- To raise awareness and familiarise students with vernacular heritage (meaning, significance, development) and the notion of environmentally sustainable conservation initially through international charters and literature and then through case studies;
- To provide the background for identifying, monitoring and evaluating passive design practices (cooling, heating, improving the microclimatic conditions) in built vernacular heritage;
- To provide the basic knowledge for the implementation of the necessary tools for monitoring (recording – temperature, humidity etc) environmental data in vernacular dwellings;
- To provide an overview of the methodological steps for sustainable and environmentally friendly conservation practices in vernacular buildings;
- To present a number of successful intervention examples aiming at the preservation and enhancement of passive strategies and the integration of active systems;

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural heritage
- Cultural studies, Cultural diversity
- Cultural Identity
- Cultural Enhancement

### HERITAGE TYPES

- Architectural heritage (Vernacular heritage)
- Documentary Heritage
- Heritage Sites
- Vernacular Architecture

### DESIGN APPROACHES

- Environmentally Responsive Design
- Energy Conscious Design
- Passive/Active Sustainable Design
- Sustainability

### DESIGN ACTIONS

- Adaptive reuse
- Preventive Conservation
- Integral Heritage Protection
- Conservation
- Refurbishment/ Rehabilitation

### TOOLS

- Mapping, documenting, cataloguing
- Digitalization of heritage
- Environmental recording

## ☰ Course Syllabus

The course includes an Introduction to vernacular architecture and its passive design aspects encountered in both urban and building scale. Particularly, this course highlights vernacular heritage significance, incorporated lessons regarding sustainability as well as international regulatory framework regarding the sustainable conservation of vernacular dwellings. It also presents methodological tools, necessary for the environmental monitoring of vernacular dwellings as well as good practices for the environmentally friendly conservation, enhancing the passive performance of vernacular buildings.

It is divided into five parts:

a) Introduction to vernacular architecture (notion of vernacular architecture and environmental conservation, reference to international charters and declarations)

b) Tools and methods for environmental assessment (main recording tools for temperature, humidity, air velocity – data loggers, weather stations, thermocameras etc)

c) Traditional building materials and vernacular forms (in relation to the environmental behavior of vernacular dwellings)

d) Environmental / Bioclimatic strategies and features in urban and building scale (cooling, heating, improving of the microclimatic conditions)

e) Good practices in the environmental conservation (general principles regarding envelope, openings, closed, semi-open, open spaces, occupant's behavior – presentation of case studies)

### TEACHING METHODS

Technical drawings  
Analytic drawings  
(diagrams)  
3D modelling  
Physical modelling  
▶ Case Studies  
Animation  
Simulation  
Rendering  
Specific international  
bibliography

### TEACHING FORMATS

Design Project  
▶ Presentation  
Technical report  
▶ Research paper  
▶ Essay  
Written Exam  
Oral Exam  
Other

### ▶ Demonstration of the syllabus coherence with the course objectives

- Comprehensive interdisciplinary training in issues of environmentally sustainable conservation of traditional settlements and vernacular dwellings  
- Development of critical thinking, interpretive approach and methodology in dealing with vernacular dwellings and their environmentally friendly conservation in the framework of current needs and challenges which constitutes a sustainable approach towards the existing built environment.  
- Training on sustainability through lessons regarding the environmental features of vernacular architecture that can be implemented in contemporary architecture.  
- Acquisition of theoretical and practical knowledge in order to fulfil the current needs for monitoring and recording the environmental features of vernacular dwellings an objective very closely related with the notion of sustainability and heritage.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

Teaching is carried out through lectures as well as through presentations and meetings for the projects. During the semester brief students' presentations of the projects take place. Visits are also organised to traditional settlements for the better understanding of the various themes which are being analysed during the semester.

## METHODOLOGY

### ASSESSMENT METHODS

Technical drawings  
Analytic drawings (diagrams)  
3D modelling  
Physical modelling  
▶ Case Studies  
Animation  
Simulation  
Rendering  
Other

### ASSESSMENT FORMATS

Design Project  
▶ Presentation  
▶ Technical report  
▶ Research paper  
▶ Essay  
Written Exam  
Oral Exam  
Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability and vernacular architecture
2	References to International charters and declarations regarding sustainable conservation of vernacular architecture
3	Key Challenges – Building materials of vernacular dwellings
4	Key Challenges -- Environmental strategies of traditional settlements in urban scale
5	Key Challenges – Environmental strategies of vernacular dwellings in building scale
6	Discussion assignment 1 – environmental features of vernacular dwellings
7	Key framework and concepts – Environmentally sustainable conservation of vernacular dwellings - principles
8	Key framework and concepts – Environmentally sustainable conservation of vernacular dwellings – case studies
9	Pre-examination activity / case study – discussion and feedback for the project
10	Key design strategies – in situ visits to case studies
11	Key design strategies – in situ visits to case studies
12	Practical skills 3 – in situ monitoring and recording of temperature and humidity in vernacular dwellings
13	Practical skills 4- in situ monitoring and recording – use of thermocamera
14	Case Study – presentation of the project for feedback
15	Final comments for the project

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4. Petruccioli, A. 2005. The courtyard house: typological variations over space and time. In: Brian, E., Sibley, M., Hakmi,

## LEARNING OUTCOMES

<b>GC1</b>	1.1
	1.2
	1.3
<b>GC2</b>	2.1
	2.2
	2.3
<b>GC3</b>	3.1
	3.2
	3.3
<b>GC4</b>	4.1
	4.2
	4.3
<b>GC5</b>	5.1
	5.2
	5.3
<b>GC6</b>	6.1
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	6.3
<b>GC7</b>	7.1
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	7.3
<b>GC8</b>	8.1
	8.2
	8.3
<b>GC9</b>	9.1
	9.2
	9.3
<b>GC10</b>	10.1
	10.2
	10.3
<b>GC11</b>	11.1
	11.2
	11.3

**\*Index list provided in the Annex 1**

- ≡ M., Land, P. (Eds.), *Courtyard Housing: Past, Present and Future*. Taylor and Francis.
5. Philokyprou, M., Michael, A., Thravalou, S. and Ioannou, I. 2013. Evaluation of sustainable design elements in the historic centre of Nicosia, Cyprus. In: Correia M, Carlos G and Rocha S (eds) *Vernacular heritage and earthen*
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Konstantinos Sakantamis

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# ENVIRONMENTAL MONITORING AND SIMULATION

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	9+1
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- ▶ Theory Course
- ▶ Seminar
- ▶ Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- Group work
- ▶ Supervision
- Master class

### Expected Prior Knowledge

It is beneficial that students are familiar with the following notions, design approaches, actions and tools: Restoration, Refurbishment / Rehabilitation, Regeneration & Adaptive reuse, Environmentally responsive & Climate sensitive design, Energy conscious & Passive/Active sustainable design, Green blue infrastructure, Nature Based Solutions, Microclimate improvement.

### Course objectives

The course focuses on environmental monitoring and simulation. It introduces methods, tools and techniques for the monitoring of outdoor and indoor climate conditions, the creation and calibration of microclimate and building simulation models, the simulation of existing and projected conditions to facilitate assessment of outdoor comfort, built structures environmental performance and energy efficiency. The main objective of the course is to link sustainability and heritage through the study of i) microclimate effects on heritage built structures, ii) improvement of energy efficiency of historic and modern heritage buildings, iii) outdoor comfort in heritage sites, iv) the effect of climate change on past, recent and future heritage. The course will offer students a general understanding of environmental monitoring and simulation methodology and relevant techniques, in relation to heritage sites and buildings, allowing them the necessary tools for the systematic and documented evaluation of design interventions on buildings and open spaces.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Resilience
- Urban patterns
- Urban narratives
- Cultural Identity

### HERITAGE TYPES

- Archaeological Heritage
- Vernacular Heritage
- Monumental heritage
- Heritage sites
- Urban heritage
- Modern heritage
- Emerging heritage

### DESIGN APPROACHES

- Passive / Active
- Sustainable design
- Renewable Energy
- Integration
- Environmentally Responsive Design
- Energy Conscious Design
- Climate Sensitive Design
- Whole-Lifecycle Design
- Carbon Neutral Design
- Thermal , Visual, Acoustic Comfort

### DESIGN ACTIONS

- Conservation
- Refurbishment/  
Rehabilitation
- Regeneration
- Nature based solutions
- Microclimate improvement

### TOOLS

- Data logger
- Thermal/Energy simulation
- Lighting simulation
- Post occupancy evaluation
- Microclimate simulation
- Historic Building Information Modelling – HBIM
- Remote Sensing

## ≡ Course Syllabus

The methods and the tools of on-site monitoring and digital simulation will be approached as a process of evaluating existing and future conditions in built environments and structures, through documentation with objective measurable criteria and indices, related to sustainability of sensitive heritage sites and buildings. The measurable environmental and anthropogenic parameters affecting the conditions within and around built sites and structures will be introduced to be evaluated in terms of their effects and/or used as input in simulation models to assess potential changes, design proposals and future developments. The practical procedures of on-site monitoring as well as building, calibrating and running simulation models and interpreting results with various alternative or complementary tools and techniques will be demonstrated as diverse options of analytic and validated assessment. The simulation process will be approached as the tool to identify future or proposed conditions, to receive feedback for design optimization and to sufficiently support design proposals outcomes.

The course will introduce basic concepts and key parameters of monitoring and simulation methodology, and diverse tools and applications for practical assessment. These will include climate analysis tools, solar geometry analysis tools, thermal comfort models and psychrometric charts, building thermal and energy performance simulation models, daylight analysis tools, airflow and wind field analysis and computational fluid dynamics models, microclimate simulation tools, Building Information Modelling tools as well as complex combinations of tools used for parametric simulation and model coupling for comprehensive assessments of outdoor and indoor performance. Students will engage in short exercises with basic computational and analytic tools and with an extended exercise on a heritage case study evaluation of building performance or microclimate development (e.g. daylight and indoor climate in historic buildings, energy consumption and carbon emissions of listed buildings, pedestrian comfort in archaeological sites, microclimate impact on monuments etc.).

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Specific international bibliography
- ▶ Other

### TEACHING FORMATS

- Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

The course views the monitoring and simulations processes as the means to assess the effects of microclimatic conditions and building environmental performance on heritage sites and heritage-built structures, to foresee potential impacts, to optimise design interventions and support design proposals based on measurable data. The theoretical background on assessment methodology, the exercises and evaluation project employ criteria and indicators related to sustainability and resilience to evaluate design strategies, measures and results. Students will be challenged with issues of selecting appropriate indices, methods and tools to scientifically assess the environmental performance and efficiency of heritage built structures and provide vali-dated estimations for future scenarios and design proposals.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

In order to contemplate on the course objectives, linking sustainability and heritage notions, lectures on key concepts will be followed by technical presentations and students will engage in short exercises with various computational tools/ techniques, review literature and complete an environmental design evaluation for a heritage built structure and/or heritage site by setting criteria, selecting tools, organising the assessment method and present the assessment results.

The course will include theory of basic concepts, environmental monitoring and simulation methods and key climate and environmental parameters related to building performance, microclimate development and user comfort, technical presentation of monitoring instrumentation and computational and analytic tools, and practical application of the basic tools/ techniques through hands-on exercises and a comprehensive project. The utilised methods will assess insolation and shading, building thermal/energy performance, daylight levels, microclimate and outdoor comfort, airflow availability and wind protection for existing and future conditions in heritage sites or structures.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- ▶ Written Exam
- ▶ Oral Exam
- ▶ Other

## COURSE STRUCTURE

1	Introduction lecture – linking sustainability, heritage and environment, referring to the key issues of: Monitoring - Calibration - Simulation - Design optimization / feedback loop (2h)
2	Lecture on Climate Analysis Tools (1h) Tools Presentation / Familiarisation (1h) - a short exercise utilising online tools (e.g., Meteonorm) (1h)
3	Lecture on Onsite Monitoring Methods & Tools (1h) Tools Presentation / Familiarisation (1h) - a short exercise utilising tools (ex. weather station) (1h)
4	Lecture on Solar Geometry, Insolation, Shading (1h) Tools Presentation / Familiarisation (1h) - a short exercise utilising online tools (e.g., shading analysis – Andrew Marsh online tool) (1h)
5	Lecture on Thermal Comfort – Bioclimatic Chart + examples of vernacular architecture climatic adaptation(1h) Tools Presentation / Familiarisation (1h) - a short exercise utilising online tools (e.g., psychrometric chart UCLA Climate Consultant) (1h)
6	Lecture on Thermal analysis - Building energy balance + examples of simulations historic buildings rehabilitation (3h)
7	Tools Presentation / familiarisation, Design Builder Software (1 h presentation +2 h students exercise)
8	Lecture on Daylight – Visual comfort – Simulation Parameters and Methods + examples of daylight simulations in historic buildings (1h) ,Tools Presentation / Familiarisation (1h) - a short exercise utilising online tools (e.g., lighting analysis – Andrew Marsh online tool) (1h)
9	Lecture on Airflow - Wind field - CFD tools (1h), Examples Presentation / Familiarisation with basic concepts (1h) – a short exercise utilising software tools (e.g., Ambiens TAS) (1h)
10	Lecture on Microclimate - Simulation parameters and tools + examples of simulations of historic sites redevelopment (3h)
11	Tools Presentation / familiarisation, Envi-Met Software (1h presentation +2 h students exercise)
12	Pre-examination Activity / Assignment Discussion, Students present their selected simulation project (Envi-met or Design builder / Open space or Building)
13	Lecture on Parametric Simulation & Building Information Modelling (1h), Tools Presentation / Familiarisation (1h) - a short exercise utilising plugins for familiar design suites (Ladybug – Grasshopper - Rihno) (1h)
14	Lecture on the combined use of Tools and Methods for the comprehensive assessment of environmental performance – example case studies – Discussion (3 h)
15	Pre-examination Activity / Assignment Discussion, Students present their simulation results

GC1	1.1
	1.2
	1.3
GC2	2.1
	2.2
	2.3
GC3	3.1
	3.2
	3.3
GC4	4.1
	4.2
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GC5	5.1
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GC10	10.1
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GC11	11.1
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**\*Index list provided in the Annex 1**

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prepared by Alkmini Paka

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# EVOLUTION OF IDEAS, THEORY, PRACTICES AND INTERDISCIPLINARY APPROACHES OF URBAN CONSERVATION

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	2
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- ▶ Theory Course
- Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- Group work
- ▶ Supervision
- Master class

▼ **Expected Prior Knowledge**  
no expected knowledge

### ▶ **Courses objectives**

The course aims at introducing students to the evolution of ideas, theory, practices and interdisciplinary approach of urban conservation –urban meaning sites and complexes apart from the individual building / monument- that have enlarged the notion of built heritage and its management through time. This evolution has encompassed the notions of environmental and sustainable approach in the theory of conservation linking it to the theory and practices derived from the field of sustainable urban design and planning. The course will try and illustrate this shift in heritage understanding and management through a corpus of literature including international charters, conventions and guidelines produced by the institutions managing heritage (ICOMOS, UN, Europa Nostra etc) while presenting their influence and implementation in emblematic case studies and precedents of good practices.

### Course illustration

photo credits: \*Venizelou Station Campaign, @Kinisi.Politon.Thessalonikis (Movement of the people of Thessaloniki).



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Urban Narratives
- Urban Patterns
- Resilience
- Cultural and Collective Memory

### HERITAGE TYPES

- Urban Heritage
- Heritage Sites
- Vernacular Heritage
- Cultural Landscape
- Industrial Heritage

### DESIGN APPROACHES

- Heritage Reprogramming
- Community Building and Representation
- Historic Urban Landscape

### DESIGN ACTIONS

- Re-planning
- Regeneration
- Adaptive Reuse
- Rehabilitation
- NBS

### TOOLS

- Topographical Surveys
- As built – As found Recording
- Mapping – Cataloguing- Documenting

## ☰ Course Syllabus

The course will be structured around lectures and seminars, while assessment methods will include written essay and research paper carried out through bibliographic research and eventually site visits. Lectures will draw upon the evolution of concepts related to heritage management practices discussing both theoretical texts and their implementation in heritage conservation projects in an urban scale. The course focuses on issues of rehabilitation and regeneration interventions in historic ensembles and sites, such as historic city centers, degraded areas of historical interest, traditional settlements, abandoned rural historical settlements, historical industrial complexes and sites. The course shall attempt an overview of methods of analysis, documentation, evaluation and management of historic complexes and sites through time and will adopt an interdisciplinary approach, dealing with the architectural, urban and environmental planning and design in historical sites, aiming at introducing students to the evolution of concepts and values regarding the reuse and conservation of urban heritage and their integration into the contemporary spatial context and modern life. Seminar sessions will follow each lecture for discussion and critical assessment of the topics presented in each lecture. Students will have to research and review relevant bibliography producing an essay on a selected case study while, they will also prepare a research paper dealing with a critical discussion on topics touched upon the course's lectures. Final Assessment will include the oral presentation of written work, submitted at the end of the course.

### TEACHING METHODS

- Technical drawings
- Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography
- ▶ Other

### TEACHING FORMATS

- Design Project
- Presentation
- Technical report
- ▶ Research paper
- ▶ Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

The historical evolution of concepts and values encompassed in the conservation approach of the built heritage reflects the ever evolving values of human society towards its past and also its future. The study of the evolution of values related to the management of heritage sites, will unfold the emergence of the various components forming the present theory and practice of this field. These components reflect the general historic, economic, political and cultural context in which they have been addressed and formulated. The recent sustainable conservation approach of the built heritage illustrates the redefinition of theory and practice in reference “to the environmental sustainability of social and economic development within the overall cultural and ecological situation on earth” (J.Jokilehto, 2004). Through this historical survey the course will provide the theoretical knowledge, critical understanding and awareness of current practices.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

The course will combine theoretical knowledge and texts with the critical presentation of precedents trying to link theory and practice. Understanding and critical review of the course content by the students will be addressed through the written work they will have to produce for their final assessment. Field trips and seminar sessions will promote discussions and in depth understanding of the issues discussed. The change of priorities as well as the broadening of the concept of urban heritage sites will be addressed for providing students with a better understanding of how sustainable human development can be linked to the present reality and the potential of existing cultural, physical and environmental re-sources.

# METHODOLOGY

## ASSESSMENT METHODS

- Technical drawings
- Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- Case Studies
- Animation
- Simulation
- Rendering
- ▶ Other

## ASSESSMENT FORMATS

- Design Project
- ▶ Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

1	Introduction lecture
2	Lecture 2 (History of Urban Conservation I / Postwar – 1977) assignment 1 (essay on a selected precedent)
3	Lecture 3 (History of Urban Conservation I / Postwar – 1977 / Good practices – case studies) / seminar / site visits
4	Lecture 4 (History of Urban Conservation I / Postwar – 1977 / Good practices – case studies) / seminar
5	Lecture 5 (History of Urban Conservation II / 1978 – 1988) / seminar
6	Pre examination activity / oral presentation assignment 1
7	Lecture 6 (History of Urban Conservation II / 1978 – 1988 / Good practices – case studies) / discussion assignment 2 (research paper)
8	Lecture 7 (History of Urban Conservation III / 1988 -2010) / seminar
9	Lecture 8 (Good practices – case studies 1988 -2010) / discussion assignment 2
10	Lecture 9 (History of Urban Conservation IV 2011- / Heritage Convention and Sustainable Development / seminar
11	Lecture 10 / (Good practices – case studies / 2011- ) seminar
12	discussion assignment 2
13	discussion assignment 2
14	Final oral presentation of assignment 2
15	Wrap-up lecture

≡ LITERATURE

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Maria Dousi

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# ENVIRONMENTAL PARAMETERS IN VERNACULAR ARCHITECTURE

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	12
Exercises	2
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- ▶ Theory Course
- Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- Group work
- Supervision
- Master class

### ▶ Expected Prior Knowledge

The course aims to understand vernacular architecture, not only as historical knowledge, but as a paradigm of sustainable architecture. It focuses on the social, construction and environmental principles of anonymous architecture, as it was shaped in the wider historical Greek area, mainly during 17th-19th centuries.

### ▶ Courses objectives

The course focuses on expanding the theoretical knowledge of the students, in the fields of the history of architecture and environmental design. Specifically, the aim is to highlight the historical dimension of the environmental behavior of the buildings of the anonymous vernacular architecture. For this purpose, the course focuses on the vernacular architecture of the wider historical Greek area, focusing on rural and urban areas of the 18th and 19th centuries.

The teaching objectives, however, are not limited to theory, but extend to knowledge that can be applicable in current design practices. It is a fact that in the buildings of the Balkan vernacular architecture, a series of intelligent solutions were applied, which are gradually being discovered anew, which can form a valuable resource for the contemporary ideological approach or the solution of specific problems.

The exercise seeks to cultivate the ability of students to observe, analyze and understand the historical constructional and environmental values of vernacular architecture, through the recording, systematic architectural analysis and documentation of the types, forms and their particular structural systems.

### Course illustration



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural Heritage
- Heritage Genealogy
- Cultural Identity

### HERITAGE TYPES

- Vernacular Heritage
- Heritage sites
- Cultural Landscape
- Heritage sites
- Emerging heritage

### DESIGN APPROACHES

- Heritage Reprogramming
- Environmentally Responsive Design

### DESIGN ACTIONS

- Integral Heritage Protection
- Restoration

### TOOLS

- Mapping, Documenting and Cataloguing
- Morphogenesis study

## ☰ Course Syllabus

Vernacular architecture that developed in the wider historical Greek area, from the 17th to the 19th century, is characterized by a series of sustainable approaches. The choice of the location of the rural and mountain settlements, the use of construction materials offered by each place, the correct orientation to the view and/or to the south, for insolation, as well as the integration into the landscape and the slopes of the terrain are principles that prevail throughout paradigms of anonymous architecture. In addition, social self-organization, mutual help in the construction of houses and the logic of the «minimum necessary» are factors that expand the importance of anonymous architecture and need a better understanding for the facts of today.

The above characteristics are analyzed through lectures that cover the entire geographical spectrum of the Greek area at the given historical period. The three major categories of northern Greece, southern Greece and the islands are examined in detail. However, in each section the environmental dimension of the phenomenon is examined, which is further analyzed in special lectures. The course culminates in a site visit to a traditional settlement, where students will come into direct contact with the above features and experience the principles of this informal architectural design.

For further understanding, but also for examining the course, students are asked to carry out an essay in a case study. There is the possibility of choosing either an individual building, of a settlement, listed or not. For the work, an on-site visit to the building or settlement must be made, during which all data will be collected (recording of basic characteristics, geometric mapping, etc.). The paper will then be based on the analysis of these elements, the comparative investigation (with literature review) and finally the critical appraisal of the case.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography
- Other

### TEACHING FORMATS

- Design Project
- Presentation
- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

The course includes an understanding of vernacular architecture, with an emphasis on its environmental characteristics. The theoretical background on history of architecture through lectures, a visit to a historic settlement and an essay focusing on a historic building or site work together towards an understanding of sustainability and heritage. Students will be able to analyze a historical building or ensemble, but at the same time acquire more general knowledge about the environmental characteristics of historical buildings, but in particular the qualities of vernacular architecture.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

Given that the aim of the course is to understand the environmental behavior of buildings of vernacular architecture, it is necessary for the students to exercise in a case study. So choosing a physical object – a real building and mapping the building and analyzing it with diagrams, will provide the basic background. Then the writing of a technical report, which will develop the technical data, as well as the bibliographic-comparative research, will lead to a complete essay. With this teaching methodology, and mainly through the realization of an essay or research paper, the objectives of the course and the understanding of the environmental behavior of vernacular architecture, both in an individual building and in comparison with the wider context, are covered.

# METHODOLOGY

## ASSESSMENT METHODS

Technical drawings  
Analytic drawings (diagrams)  
3D modelling  
Physical modelling  
▶ Case Studies  
Animation  
Simulation  
Rendering  
Other

## ASSESSMENT FORMATS

Design Project  
▶ Presentation  
▶ Technical report  
▶ Research paper  
▶ Essay  
Written Exam  
Oral Exam  
Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability, heritage and people. Values of vernacular architecture
2	Lecture: tools and methods on analyzing vernacular architecture
3	Lecture: archetypes and prototypes
4	Lecture: antiquity and Byzantium. The lesson of continuity
5	Selection of topics / discussion case study
6	Lecture: building methods of vernacular architecture 1
7	Lecture: building methods of vernacular architecture 2
8	Sustainability of vernacular architecture: a matter of materials
9	Lecture: vernacular architecture 1: northern and central Greece
10	Lecture: vernacular architecture 2: southern Greece
11	Lecture: vernacular architecture 3: islands
12	Sustainability of vernacular architecture: a matter of place
13	Site visit
14	Lecture: critical regionalism and contemporary architecture. The lesson of heritage genealogy
15	Final presentation

<b>GC1</b>	1.1
	1.2
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**\*Index list provided in the Annex 1**

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Sakkos and Maria Dousi

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# MODERNIST ARCHITECTURE RESTORATION

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	10
Exercises	2
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- ▶ Theory Course
- Seminar
- Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- ▶ Individual work
- ▶ Group work
- ▶ Supervision
- Master class

### Expected Prior Knowledge

This course will allow students to become familiar with the following notions, design approaches and restoration practises: Restoration, Refurbishment / Rehabilitation, Regeneration & Adaptive reuse, Authenticity, Modernizing Modernism.

### Courses objectives

Aim of the course is to bring students in contact with modernist architecture and the controversial issue of its restoration and reuse. Firstly, the course aims to clarify that modernist and brutalist architecture are part of our built heritage, despite of their short lifetime and the fact that the majority of the buildings and complexes, constructed during that period and following the modern movement's principals (1950-1975) are still in use.

Due to the above, an alternative approach is needed, when reuse and restoration projects on those buildings and complexes are attempted. Beyond that new paradigm of restoration theory, modernist architecture management should also include adaptability and sustainability notions. The presentation of this new paradigm and additionally of several successful and unsuccessful restoration case studies, will allow future architects to recognize historical and aesthetic values of modernist architecture and eventually gain the knowledge to deal with revaluing modern heritage with appropriate methods and practices.

### Course illustration



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural Identity
- Cultural Heritage

### HERITAGE TYPES

- Modern Heritage
- Heritage sites

### DESIGN APPROACHES

- Passive / Active Sustainable design
- Renewable Energy Integration
- Climate Sensitive Design
- Heritage Reprogramming

### DESIGN ACTIONS

- Conservation
- Refurbish-ment/ Rehabilitation
- Regeneration
- Integral Heritage Protection
- Restoration

### TOOLS

- Historic Building Information Modelling – HBIM
- As-Built Recording

## ☰ Course Syllabus

Object of the course is to clarify that the reuse and restoration of preservation-worthy modernist buildings is indispensable and demands an alternative approach that lies far away from their preservation as museum pieces. This approach is mainly based on the minimization of potential conflict between preserving the heritage values of modernist architecture and upgrading the buildings to current standards. To this end, the present course includes both theory teaching and case studies presentations.

Firstly, the course is concerned with the theoretical issue of modernist architecture restoration, also including its adaptive reuse. Interdisciplinary analysis of the unique historical and aesthetic values, that each monument displays, is crucial. Moreover, lectures focusing on the importance of the initial design concept and the challenges that occur from the buildings' materiality, will allow students to recognize that restoration and reuse of modernist heritage should be different than those of previous architectural periods monuments.

For better understanding of this approach and the evolution of restoration's theory, several successful and unsuccessful examples of modernist buildings' restoration, in Greece and internationally, are presented. The assessment of the examples is based on authenticity of architectural concept and form as well as sustainability.

Students are invited, individually or in groups, to select, analyze and evaluate a restoration and reuse project that took place on a preservation-worthy modernist building or complex. Additionally, students will be asked to provide suggestions for potential corrections.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography
- Other

### TEACHING FORMATS

- Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

This course enhances the basic knowledge in the subjects of heritage and sustainability. Moreover, it deals with modernist architectural heritage that is on risk of falling into disrepair through neglect or being rendered unrecognizable. By presenting examples of modernist heritage's restoration and reuse, this risk comes into focus. In addition, the necessity of revaluing modernist architecture, using proper practices and methodology, becomes obvious. By introducing the latest theories in the field of heritage restoration, students prepare themselves, as future architects, to adopt suitable practices for revaluing modernist architecture.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

Teaching methods that will be used during the course will introduce to the students the basic principles of modernist heritage's restoration and reuse. Presenting preservation-worthy modernist buildings and complexes, by using technical reports, technical and analytic drawings (diagrams) of the initial design, will allow students to become familiar with modernist architecture and understand its historical and aesthetic value. By presenting successful and unsuccessful restoration case studies, students could understand better the proper practices for revaluing modernist heritage following the principals of sustainability.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- Design Project
- ▶ Presentation
- ▶ Technical report
- Research paper
- ▶ Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability, heritage and people. Values of vernacular architecture
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13	Site visit
14	Lecture: critical regionalism and contemporary architecture. The lesson of heritage genealogy
15	Final presentation

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<b>GC6</b>	6.2
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<b>GC7</b>	7.2
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	9.1
<b>GC9</b>	9.2
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<b>GC11</b>	11.2
	11.3

**\*Index list provided in the Annex 1**

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UNESCO Chair

USE

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prepared by Julia Rey-Pérez, Marta  
García-Casasola

SC18

**specializations**  
book of courses

# HISTORIC URBAN LANDSCAPE (HUL)

## COURSE ID CARD

semester	1-3
ECTS	3
status	elective

### ACTIVE TEACHING CLASSES

Lectures	4
Exercises	6
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- Intensive Workshop
- Theory Course
- ▶ Seminar
- ▶ Laboratory work
- Research Thesis
- Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- Individual work
- ▶ Group work
- ▶ Supervision
- ▶ Master class

### Expected Prior Knowledge

The "Recommendation on the Historic Urban Landscape" (HUL) drawn up by Unesco in 2011 is a truly innovative tool for intervening and managing urban heritage threatened by uncontrolled development and climate change. The course covers the different facets of the Historic Urban Landscape Recommendation, from the most theoretical to the practical cases. In order to understand the scope of this document, it is important to deepen the relationship between heritage and sustainability and the consideration of culture as the fourth pillar of sustainable development.

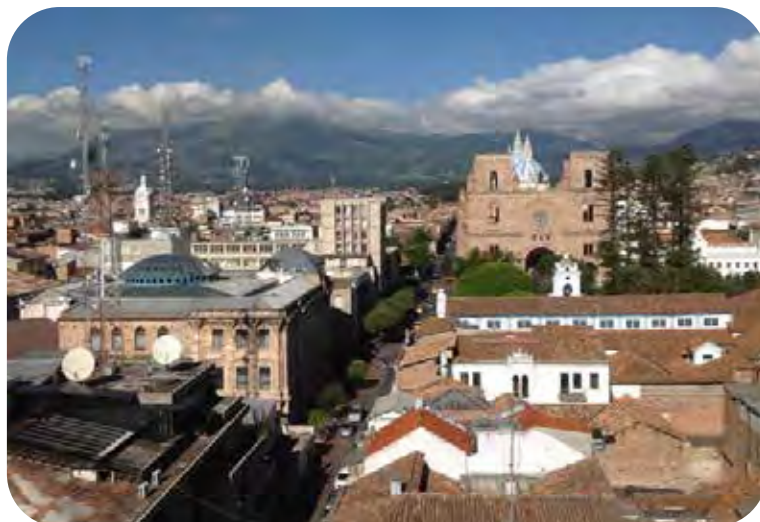
However, the practical component is present in the course since the student, in groups of 3-4 and based on the pilot cases shown, will develop a practical exercise of implementation of the Recommendation implementing the methodology of the Action Plan proposed by Unesco, as well as the tools provided. The heritage city (understood as something that goes beyond the historic city or the historic ensembles, where it acquires a territorial component), like any living ecosystem, evolves as changes take place, and this is the key point: knowing how to "manage change", that is to say, managing both urban conservation and sustainable urban development in parallel.

### Courses objectives

The overall objective of this course is to provide the student with an in-depth understanding of the Recommendation on the Historic Urban Landscape, its approach and the possibilities offered by its use. Through this recommendation the student will be able to focus on the complexity of the heritage city,

### Course illustration

*Historic Center of Cuenca, Ecuador. Source: F. León, 2015*



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural and collective memory
- Resilience

### HERITAGE TYPES

- Urban landscape
- Heritage site

### DESIGN APPROACHES

- Historical Urban Landscape
- Design for all in Cultural Heritage

### DESIGN ACTIONS

- Heritage management
- Adaptive reuse

### TOOLS

- Colaborative workshop - CHARRETTE
- Heritage Value Matrix

- ▼ taking into account the diversity of layers and resources that make it up, as well as the stakeholders involved in its daily experience. Another objective is that the student reflects on the importance of this urban diversity, and how to manage the heritage city is, in short, to manage this historical heterogeneity. In addition, the course aims to make students aware on the importance of the sustainable use of heritage resources for the social and economic improvement of local populations (known in the Anglo-Saxon world as Adaptive reuse). In addition, in order to understand the international dimension of the Recommendation, you will be provided with information on different case studies. Finally, another aim is to provide strategies for the student to be able to consider the cultural significance of an urban area, identify its values and attributes, redesign based on those values and discuss the impact of that redesign.

## ≡ Course Syllabus

The contents are divided in 3 units along 10 weeks:

Unit 1\_Contextualization: HUL

W1 (lecture): Part 1: Cultural Policies. Introduction to the HUL Recommendation. Lights and Shadows. Part 2: Following the methodology of the IAPH: How to Create a Cultural Landscape Guide cultural

W2 (Exercise): Identification of the study area: select the case study of World Heritage areas, collection of materials and Heritage mapping

W3 (lecture): Part 1: Heritage and Sustainability. Heritage and culture as the fourth pillar of sustainability. Part 2: Heritage management processes

Unit 2\_Identification of attributes and values

W4 (lecture): Active Plan and Tools. Methodology of work

W5 (Exercise): identification of the heritage problem and vulnerabilities. Review cultural and environmental planning on different scales. identification of stakeholders

W6 (lecture): International Pilot Cases

W7 (exercise): Identification of attributes and values heritage in Study area

Unit 3\_Planning: Impact Assessments in a World Heritage Context as a model to implement in other heritage sites

W8 (exercise): Definition of criteria and intervention strategy / lines of action

W9 (lecture): How to carry out Heritage Impact Assessments (HIAs) in change management situations. Indicators: adverse or beneficial

W10 (exercise): discuss the impact of that redesign.

Recommendations to minimized the impacts and to look for the quality of the results.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)  
3D modelling  
Physical modelling
- ▶ Case Studies  
Animation  
Simulation  
Rendering  
Specific international bibliography

### TEACHING FORMATS

- Design Project
- ▶ Presentation  
Technical report  
Research paper  
Essay
- Written Exam
- Oral Exam
- Other

### ▶ Demonstration of the syllabus coherence with the course objectives

The student will acquire capacities which usually are outside of the architecture. That means that they will work from an interdisciplinary perspective and transferring the knowledge increased during the process. Also, they have to work with local communities, which means to work in participatory processes.

The main activities to develop will be:

- >To look for documentation, organising and open archive
  - >To describe the site, emphasising the cultural aspects through a new historical reading
  - >To identify attributes and values: heritage characteristics
  - > To prioritise the importance of each characteristic
  - > To justify the intervention, to manage change
  - > to evaluate the transformation: beneficial and adverse
- All these activities will be carried out through participatory processes, which involve all the stakeholders identified in the heritage local community. At the same time, the transfer of knowledge will be done.

Graphic representations, tables, schemes, draft, should be used in order to manage all the information from a transversal perspective and to ensure the dissemination.

### ▼ Demonstration of the teaching methodologies coherence with the course objectives

The student will be able to implement the Recommendation on HUL in a heritage site. That means the approach to cultural sites with a high complexity through working with a work methodology consolidated in the field of heritage.

The main steps will be as follows:

- 1\_MAP RESOURCES natural, cultural and human
- 2\_REACH CONSENSUS on what to protect: values and attributes
- 3\_ASSESS VULNERABILITY to change and development
- 4\_INTEGRATE above in urban development/ framework
- 5\_PRIORITIZE ACTIONS for conservation and developments
- 6\_ESTABLISH LOCAL PARTNERSHIPS and management frameworks

The HUL approach implementation will take into account the different scales and the knowledge produced from the different transdisciplinary perspectives. It is very important to contextualise the site and the heritage problem to be able to organise the process in order to reach good results.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)  
3D modelling  
Physical modelling
- ▶ Case Studies  
Animation  
Simulation  
Rendering  
Other

## ASSESSMENT FORMATS

- Design Project
- ▶ Presentation
- ▶ Technical report  
Research paper  
Essay  
Written Exam  
Oral Exam  
Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – linking sustainability, heritage and people and environment
2	Practical skills 1 / Pre examination activity / assignment 1 (workshop, walk, interview ....)
3	Key Challenges
4	Key Challenges
5	Practical skills 2
6	Pre examination activity / discussion assignment 1
7	Key framework and concepts
8	Key framework and concepts
9	Pre examination activity / case study
10	Key design strategies
11	Key design strategies
12	Practical skills 3
13	Pre examination activity / discussion case study
14	Case Study
15	Wrap-up lecture

≡ LITERATURE

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	1.2
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	5.3
<b>GC6</b>	6.1
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<b>GC7</b>	7.1
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<b>GC9</b>	9.1
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	9.3
<b>GC10</b>	10.1
	10.2
	10.3
<b>GC11</b>	11.1
	11.2
	11.3

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**\*Index list provided in the Annex 1**



# WORKSHOPS

Workshop 1

Sustainable Reconstruction in Urban Areas



Workshop 2

Adaptive Reuse in Urban Areas



Workshop 3

Resilience and Future Heritage

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W01

**workshops**

book of courses

# SUSTAINABLE RECONSTRUCTION IN URBAN AREAS

## COURSE ID CARD

semester	1
ECTS	
status	extracurricula

### ACTIVE TEACHING CLASSES

Lectures	
Exercises	
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- ▶ Intensive Workshop
- Theory Course
- ▶ Seminar
- ▶ Laboratory work
- Research Thesis
- ▶ Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- Individual work
- ▶ Group work
- Supervision
- Master class

### Expected Prior Knowledge

The workshop suggests looking at heritage as a social, economic and political resource to redefine the relationships between all actors involved (local and preservation authorities, university, stakeholders), highlighting the essential role of inhabitants and communities, as suggested by the Faro Convention (Faro Convention, 2005). Principles for sustainable management and regulation for the reconstruction of cultural relations are an opportunity for discussion and debate during the student workshop between students, the university, public authorities and stakeholders. In drafting the project strategy, formulating a multi-sectoral objective and vision is central, including a redefinition of the purpose of historic buildings as value-oriented buildings, translating these intentions into public policy. In this respect, cooperation with local authorities and administrations dealing with landscape, heritage and the city is crucial to transferring students knowledge and skill for their future professional activities.

### Courses objectives

The workshop aims to test the students' autonomous and critical approach acquired through the first semester courses. The activities organised during the workshop aim to develop and deepen fundamental knowledge and skills on all aspects of heritage/sustainability and their relation to architecture urban design and heritage. The critical point for students is to apply practical tools and theoretical assessment concerning the PAST to understand the importance of HERITAGE and its relationship to cultural, economic, social and environmental SUSTAINABILITY issues in selected case studies. During the on field activities, cooperation with local agencies and laboratory work students acquire technical tools and learn how to deal the complexity of a project in relation to different scale, multiple speaking parts and stakeholders (community, local bodies, preservation agencies and experts). The aim is to understand how cultural heritage can influence contemporary communities and designers. The workshop seeks to illustrate the lasting impact of cultural and historical places and encourages rethinking them through contemporary points of view.

### Course illustration.

Fig. 2. Educational model application at the HERSUS International Student Workshop C2: SUSTAINABLE RECONSTRUCTION IN URBAN AREAS. (<https://hersus.org/syllabus-sustainable-reconstruction-in-urban-areas/>).



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural Heritage
- Cultural and Collective Memory
- Cultural Identity
- Cultural Enhancement

### HERITAGE TYPES

- Tangible and Intangible Heritage
- Industrial Heritage
- Archaeological heritage

### ☰ Course Syllabus

The workshop consists of blended activities developed in three phases:

- First online phase of presentation of the case study and workshop topics;
- Second in-presence phase that will be dedicated to physical place awareness and dialogue with local authorities and communities;
- Third online phase to refine the reflections and graphic outputs;
- Digital Exhibition

During the first phase (2 days), detailed lectures present the case study, analysis tools, that students will use during the field work (e.g. Collaborative cartography, Historical-Critical Interpretation, Artistic approaches, Environmentally Responsive Design, Public Advocacy for Social Participation, Adaptive Reuse Temporary planning and Meanwhile spaces, Cultural Enhancement) and workshop topics. During the second phase (5 days), students can visit the site and apply the teaching tools presented to analyse the case study and to deal with the community. This phase also includes group discussions and progress checks with the teaching team and experts from the local and preservation authorities, concerning both cultural recognition and project strategies. The last phase (3 days) focuses on representing and verifying the graphic material with the teaching team to present the works to the administrations and communities in a Digital Exhibition.

Each group of students has to elaborate materials that allow them to understand the process of recognising the values they have identified (PO FOLIO) and that summarize the cultural, social and urban reconstruction strategies they have identified (BOARD/PANEL).

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling  
Physical modelling
- ▶ Case Studies  
Animation
- ▶ Simulation  
Rendering  
Specific international bibliography

### TEACHING FORMATS

- Design Project
- ▶ Presentation  
Technical report  
Research paper  
Essay  
Written Exam  
Oral Exam  
Other

### ▶ **Demonstration of the syllabus coherence with the course objectives**

During the first phase of the workshop, online, the presentation of heritage and sustainability of urban reconstruction issues through lectures by guests are an opportunity for students to begin to understand the debate on heritage and sustainability. Furthermore, the presentation of the case study allows the students to compare the issues of a specific case with the themes of the workshop and to apply the tools offered by the lecturer to develop the final reflections and papers. Through the on-site experience in the second phase and the dialogue with local operators dealing with the territory and heritage, the students have the opportunity to understand the case study's specificity and verify its physical consistency, identity values and memory stratification. The analysis of historical and technical materials (provided in the first phase) and the site visit are the material for the students to use to map the cultural heritage of urban areas. The places and architectures are associated with objective historical data, physical data on the consistency of the sites, and intangible values that derive from the awareness acquired through the study of the materials, the relationships studied in situ and historical stratification. Finally, each place and element of the city is delineated through design strategies to reconstruct the city's relationships with the identified site and for restitution through cultural, economic, environmental and social sustainability. The on-site experience and the dialogue with the local bodies and institutions are professionalising experiences that aim to give students relevant tools for their future works. During the third phase, the online monitoring of the works allows the students to define the graphic outcomes describing the process and the results of their analysis in an autonomous but accompanied form to be as intelligible as possible for online and international communication.

### ▼ **Demonstration of the teaching methodologies coherence with the course objectives**

The workshop includes:

- \_ Ex-cathedra introductory lectures;
- \_ Seminars with invited lecturers;
- \_ On site survey and conversation with the administration;
- \_ Case studies collective review sessions;
- \_ Digital Exhibition.

Ex-cathedra lectures and invited lecturers' seminar will enable students to learn about theories and strategies for heritage and urban reconstruction. Specific lessons on tools and analytical strategies will help them to test different methodologies to evaluate and verify the cultural values of the case study heritage site. The opportunities for discussion with the teaching team, external lecturers, local authorities and colleagues will help students to develop a critical and autonomous vision of the strategies of reconstruction and social, cultural, economical and environmental sustainability.

# METHODOLOGY

## ASSESSMENT METHODS

Technical drawings  
Analytic drawings (diagrams)  
3D modelling  
Physical modelling

- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Other

## ASSESSMENT FORMATS

- Design Project
- ▶ Presentation
- Technical report
- ▶ Research paper
- Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

- 
- 1a **Introduction lecture – Case study introduction**  
- Workshop Introduction and Overview  
- Expected learning outcomes presentation and methodology  
- Case study presentation  
- Local network and authorities presentation
- 
- 1b **Key framework and concepts 1**  
- Presentation of the case study  
- Seminars with local authorities agents on the case study  
- Presentation of the tools and how to use them
- 
- 1c **Key framework and concepts 2**  
- Seminars with international guest on the cultural, architectural and urban frame of Urban Reconstruction
- 
- 2a **Key Challenges 1**  
- Survey on site and historical-cultural interpretation of the local case study with the tools
- 
- 2b **Practical skills 1**  
- Workshop activities with students and local teaching and tutor team
- 
- 2c **Key Challenges 2**  
- Critical session with invited lecturers and local agents: debate on proposal for local case study
- 
- 2d **Practical skills 2**  
- Workshop activities with students and local teaching and tutor team
- 
- 2e **Pre examination activity 1 / discussion assignment**  
- Final presentations of students strategies for the case study with the international teachers team
- 
- 3a **Practical skills 3**  
- Online workshop activities with students and local teaching and tutor team
- 
- 3b **Practical skills 3**  
- Online workshop activities with students and local teaching and tutor team
- 
- 3c **Practical skills 3**  
- Online workshop activities with students and local teaching and tutor team and final digital exhibitio
- 
- 4 **Final digital exhibition**  
- Digital exhibition on the HERSUS SHARING PLATFORM: each group board will be published online and the portfolio will be part of serveral publication on the platform by students teams.
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≡ LITERATURE

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## STRATEGY

Linking the areas that concentrate quanta of different activities with a path that allows the user to have a personal tour of the garden while being in perpetual "dialogue" with the historical surroundings.

## ARCHITECTURAL ASPECTS

Identifying the buildings with high architectural value on the site and to its immediate vicinities will architecture the central structure in the urban between the garden and the city.

## LANDSCAPE ASPECTS

Establishing areas regarding the materials used in pavements (such as gravel) that create a disruption in terms of accessibility for disabled users and establish obstacles that could open into the garden to its surroundings.

## URBAN ASPECTS

Identifying the green's main and least used spaces, the path for most people, the urban paving through it and the urban connections that define the garden's history.

- █ DEFORMED SPACES
- █ CONNECTING PATHS
- █ MONUMENTS



- 01 VISUAL DIALOGUE
- 02 TACTILE RECOGNITION
- 03 BELONGING



## INCLUSIVE ACCESSIBILITY | SENSORIAL ROUTES THROUGH HERITAGE SITES



The garden has always been the "living place" of the city, a place for recreation, contemplation and integration of the neighborhood nature.

Being a "living space" on the urban fabric, the garden offers the environment that helps create a personal atmosphere and

an opportunity of historical observation of the landscape and its unique heritage, through the spectrum of the living time.

Located in Valencia, Spain, a UNESCO World Heritage site, it is a place of high concentration of buildings and monuments. Although the site is the main point of the city that identifies the city of the city, it is not the only one. It is a place of high concentration of buildings and monuments, but it is not the only one. It is a place of high concentration of buildings and monuments, but it is not the only one.

Observing the phenomenon was the starting point of the project, which aims to analyze the factors that created this situation. How can we help recover the garden to the city and, consequently, how the garden can become an accessible space for all those who have to share it with the rest of the city?

The main accessibility is often a typical topic, especially when it is related to the city. The solution of the project is the result of finding the balance to the relationship between the two: a non-invasive and original intervention that respects the character of the existing space through the use of new solutions.

An architectural path of singular and integrated elements is proposed to facilitate a sensory dialogue between the visitor and the urban fabric, which is created by the use of the city's "living space" or the garden's "living space" at certain points along the path.

As the garden is reintegrated into the urban fabric, creating the new and necessary way of enjoying the garden through the sense of the history, culture, memory and new values.

GROUP 2 |



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W02

**workshops**

book of courses

# ADAPTIVE REUSE IN URBAN AREAS

## COURSE ID CARD

semester	2
ECTS	5
status	elective

### ACTIVE TEACHING CLASSES

Lectures	5
Exercises	5
OFL	
SRW	
Other	

### COURSE TYPES

- Design Studio
- ▶ Intensive Workshop
- Theory Course
- Seminar
- Laboratory work
- Research Thesis
- ▶ Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- Individual work
- ▶ Group work
- Supervision
- Master class

### Expected Prior Knowledge

Eligible applicants are individuals who have basic knowledge for the documentation of historic buildings and approaches for their historic study

### Courses objectives

Through the workshop students should gain:

- specific knowledge and skills addressing the reuse of built heritage and its diverse assets
- detailed knowledge and insight in types of heritage and function of building and urban area
- skills to identify the best option for specific design approach i.e the balance between the preservation of original uses and assets, its transformation and evolvement.
- instruction about the possibilities of transformation of selected sites and objects, so they continue to be a part of daily life.
- knowledge to deal with adaptive reuse in a professional, methodological clear and respectful way.
- necessary tools for approaching the topic of reuse from a holistic multidisciplinary point of view in order to secure cohabitation of historical elements and structures with newly planned and implemented strategies and objects and provide a notable change to an existing function when the former is obsolete.
- tools to read the correlation of possible transformation of cultural heritage and identity with long term sustainability and historical perspectives.
- specialist knowledge and skills in real case studies through focusing on specific dwellings, spaces and routes that have lost their primary function.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Cultural heritage
- Cultural Identity
- Cultural Enhancement

### HERITAGE TYPES

- Architectural heritage (Vernacular heritage)
- Documentary Heritage

### DESIGN APPROACHES

- Environmentally Responsive Design
- Passive/Active Sustainable Design

### DESIGN ACTIONS

- Conservation
- Restoration
- Reuse
- Regeneration
- Refurbishment/ Rehabilitation

### TOOLS

- Mapping, documenting, cataloguing
- Collaborative workshop
- Digitalization of heritage
- Photogrammetry

## ≡ Course Syllabus

The course has the structure of a workshop. Students are divided into three groups and each group works on one of the following themes related to Nicosia Historical Center and specific o Chrysaliniotissa and Ayios Kassianos neighbourhoods and the vernacular and historic buildings of the area. Each workgroup investigates the case study with an interdisciplinary attitude at the specific scales presented in the topic.

Topic I: Adaptive reuse of existing vernacular urban dwellings. The divided walled city of Nicosia as a place of culture and memory.

The aim of this topic is to investigate the urban area of the walled city of Nicosia focusing on the two neighborhoods under study, highlighting their cultural and historical values. The analysis aims to relate the private and historic dwellings of these neighborhoods with the whole walled city of Nicosia and its different historic layers as well as the adjacent green line/buffer zone. The proposals should include, at different scales, different scenarios in order to regenerate the whole neighborhoods and at the same time suggest new connections of these areas with the rest of the walled city and the green line.

Topic II: Traditional courtyards and transitional spaces of private vernacular urban dwellings. Intangible and tangibles values as a tool for multidisciplinary reading and revival proposals of the divided walled city of Nicosia.

This topic considers open and semi open spaces of private dwellings as important features of the city and as a part of a network of "transitional" places within the urban area. The analysis aims at recognizing open spaces to the vernacular dwellings, etc., as tools for understanding the dwellings and the whole urban area over time. This analysis helps towards the preparation of proposals for sustainable adaptive reuse of cultural heritage, focusing not only on tangible but also on intangible values.

Topic III: Re-discovering routes and paths. Re-use and revival of the divided walled city of Nicosia through cultural network and interconnections.

The purpose of this topic is to relate the streets and narrow cul-des-sacs type roads of the two neighborhoods with the urban context of the walled city of Nicosia through a critical interpretation of the signs and traces of time and history of Nicosia. Existing paths and proposals for new routes could become an evaluation tool for a sustainable adaptive reuse redevelopment project of the historic centre of Nicosia and its heritage.

## TEACHING METHODS

- Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- Rendering
- Specific international bibliography

## TEACHING FORMATS

- Design Project
- Presentation
- Technical report
- Research paper
- Essay
- Written Exam
- Oral Exam
- Other

### ▶ **Demonstration of the syllabus coherence with the course objectives**

The different topics of the syllabus searches general proposals and strategies concerning the adaptive reuse of the walled city of Nicosia focusing on vernacular dwellings. Students should acquire critical awareness and develop analytical theoretical and practical (digital etc.) tools necessary to get a holistic knowledge of the area. They will acquire the necessary information to prepare design strategies for environmental, social and cultural sustainable adaptive reuse for vernacular and historic buildings. From the urban scale to the dwelling scale, students should identify historical, vernacular, and more recent dwellings and recognize the role they play to the formation of the identity of the whole area. This analysis will help students to acquire a holistic overview of a historic area so that they can develop environmental, social and cultural sustainable adaptive reuse and regenerate proposals for the vernacular dwellings including the abandoned ruins / buildings and all the premises without a use as well as open private spaces in order to enhance the intangible and tangible values of the whole area. The general proposals will be implemented in selected case studies dwellings. At the same time the students will get familiar to identify accesses, routes and paths that bound the different historic areas. Students should achieve critical awareness and get familiar with analytical tools necessary to develop design solutions to translate the historical paths and routes in narrative and accessibility design elements for urban areas' environmental, social and cultural sustainable adaptive reuse.

### ▼ **Demonstration of the teaching methodologies coherence with the course objectives**

Face to face

Lectures / Tutorials / Field work

Presentations / lectures by experts and by the tutors

In situ visits, documentation and discussion

Recording and documenting of area under study

Projects assessment - feedback - interim and final presentations in class of projects to be developed

# METHODOLOGY

## ASSESSMENT METHODS

- Technical drawings
- ▶ Analytic drawings (diagrams)
- 3D modelling
- Physical modelling
- ▶ Case Studies
- Animation
- Simulation
- ▶ Rendering
- Other

## ASSESSMENT FORMATS

- Design Project
- ▶ Presentation
- Technical report
- Research paper
- ▶ Essay
- Written Exam
- Oral Exam
- Other

## ▼ COURSE STRUCTURE

1	Introduction lecture – the notion of reuse of urban area / linking sustainability and heritage
2	Series of lectures by experts– on line presentations on different aspects of the notions of reuse, heritage and sustainability
3	Pre-examination activity - workshop, walk, visit to the case study
4	Key Challenges – Methods of Documentation using photogrammetric methods and maps
5	Practical skills / Documentation of the case study area through photos, maps, sketches, texts
6	Pre-examination activity / discussion assignment of the three topics – documentation of the case study area
7	Key framework and concepts – preparation of diagrams – plans, sections, renderings
8	Key framework and concepts – preparation of 3d sketches of the area
9	Pre-examination activity / case study – discussion and feedback for the proposals of the 3 topics
10	Key design strategies – environmental and sustainable assessment of the proposals
11	Key design strategies – environmental assessment on different scale – urban (streets, public space), building scale (dwellings and open yards) – tangible and intangible values
12	On line presentation of the proposals for feedback
13	Pre-examination activity / discussion of the proposals of the 3 topics
14	Case Study – Final presentation of the whole project for feedback
15	Final comments for the project

GC1	1.1
	1.2
	1.3
GC2	2.1
	2.2
	2.3
GC3	3.1
	3.2
	3.3
GC4	4.1
	4.2
	4.3
GC5	5.1
	5.2
	5.3
GC6	6.1
	6.2
	6.3
GC7	7.1
	7.2
	7.3
GC8	8.1
	8.2
	8.3
GC9	9.1
	9.2
	9.3
GC10	10.1
	10.2
	10.3
GC11	11.1
	11.2
	11.3

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**1. Adaptive reuse of existing traditional urban dwellings**

**MANAGEMENT STRATEGIES**

II PHASE

- Ruins
- Labeled
- Courtyard



**RUINS MANAGEMENT**



**HYPOTHESIS ON THE RUINS**

The focus is primarily on finding ways to take into advantage the empty spaces and then, adaptably incorporate ruins with existing vernacular architecture and use in the area.

I PHASE

- Residential
- Advership
- Commercial
- Workspaces



**SUGGESTED FUNCTIONS**

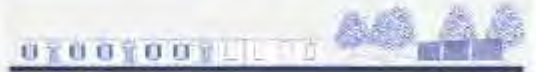


**HYPOTHESIS ON THE ABANDONED**

**STRATEGIC OVERVIEW**

What uses are necessary to enhance the residential area, which is the prevailing one?  
 How this area can be "healed" through adaptive reuse?  
 The aim is to strategically revitalize part of the complex, introducing not necessarily completely new functions. By adding specific functions that will enhance the local community, the aim is to highlight the area as a prototype of community living.

**PROPOSAL FOR THE ABANDONED AND RUINS NEXT TO THE BUFFER ZONE**



SITE ANALYSIS

- Ruins
- Empty/Abandoned (100 m<sup>2</sup> - 100 m<sup>2</sup>)
- Leisure
- Commercial
- Educational/Cultural
- Advership
- Factory
- Deadend
- Courtyard
- Labeled buildings
- Traffic route



**AREA ASSESSMENT**

- Ruins
- 2 floors
- Potential for another floor
- No direct access from the street

The identification of the built structure within the location is based primarily on the urban matrix and position in the city, important traffic routes and the presence, or absence, of green spaces. The analysed layers are primarily concerned with the use, the status, the size and the basic characteristics of the buildings.





#### SKETCHES



Three axes of public space established from historical connections between blocks

#### SPATIAL FLUIDITY



The research process developed through three phases. The first, at the 100 city of Nicosia, in the first phase, allowed us to identify urban axes in the context of the existing fabric, connecting existing buildings as well as the historical streets that have a great influence.

In the second phase of the research process, we offer us the re-interpretation of the degree of public space, where three categories were created: public space, semi-public space and private space. By grouping these spaces, such as the existing axes between the existing blocks, we create axes of public space between the two public spaces, the idea of connecting all these spatial categories was created.

Through the third phase, the concept of horizontal circulation, from the main road to pass through blocks, the concept is based on the architectural quality of the street, with the re-organization of the environment, the elements of urban form, morphology and, depending on the location, changes its appearance.

The idea is to create in Nicosia the spatial organization that the street that is not a simple path but a platform for people and things of everyday life. The intervention is architectural and conceptual, it is visible and, and the system created that we created can be applied to other situations or scenarios in the city.

#### PLAN OF THE NEW DESIGN



#### 1. EXTERIOR OF THE CO-HOUSING HOUSE



#### 2. EXTERIOR OF THE CO-HOUSING HOUSE



#### 3. EXTERIOR OF THE CO-HOUSING HOUSE



#### 1. EXTERIOR OF THE CO-HOUSING HOUSE



#### 2. EXTERIOR OF THE CO-HOUSING HOUSE

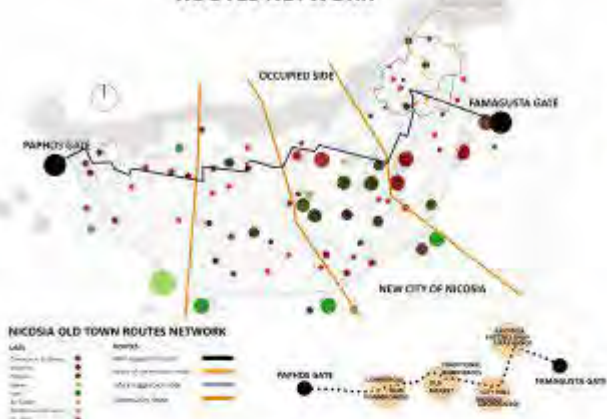


#### 1. PRIVATE DESIGN





#### ROUTES NETWORK



#### SITE ANALYSIS

Existing Road Sections

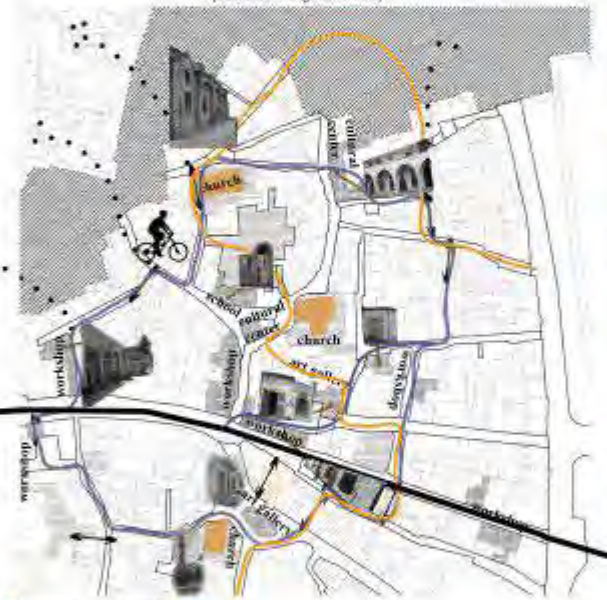


#### MAPS



#### NEW ROUTE

(Scale Of Neighborhood)



#### TYPES OF PASSAGES



## (RE) CONNECTING

Reconnecting is about creating a district way of navigating through the scenery in the walled city of Nicosia. This project has 3 different scales of approach: **a. the whole area of the walled city b. the neighborhood c. the passages.** The walled city is characterized of a complex network that mainly leads to the buffer zone. In order to avoid this has created a network with different qualities of routes. The **main route** is an east to west connection, parallel to buffer zone, begging from the Pathos Gate and ending at Famagusta Gate and crossing also all the important buildings of the walled city. The network is completing by vertical lines witch connect the new city of Nicosia with Old city of Nicosia and lead, meet the main route. At the scale of the neighborhood there are two different kind of new routes, the one can easily hop on and off the main route, giving the chance of exploring the scenery and all the different points of interest, and circling back on it. The second route is creating a network of open spaces that can be explored, take a break in and interact with people. These two are interact and overlap at certain segments, creating a complex network. In the designing scale all the different types of passages that someone can meet inside the routes are characterized by local objects, vegetation that which are combined differently in every scenario of passage, but emphasizing the social,cultural,architectural identity of the study area.





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W03

**workshops**

book of courses

# RESILIENCE AND FUTURE HERITAGE

## COURSE ID CARD

semester	3
ECTS	3
status	

### ACTIVE TEACHING CLASSES

Lectures	8
Exercises	1
OFL	
SRW	
Other	

### COURSE TYPES

- ▶ Design Studio
- ▶ Intensive Workshop
- Theory Course
- Seminar
- Laboratory work
- Research Thesis
- ▶ Field Work
- Internship Practical training
- Other

### FORMS OF TEACHING

- Individual work
- ▶ Group work
- ▶ Supervision
- Master class

### Expected Prior Knowledge

Expected prior condition: enrollment in MSc / MArch in Architecture and/or Sustainability and/or Heritage Conservation.

### Courses objectives

The workshop focuses on the redevelopment of a dense urban area within the historic city centre and deals with the interplay between cultural heritage values and intense commercial use, aiming to identify, evaluate, and utilise tangible and intangible heritage for composing sustainable scenarios towards enhanced urban resilience of the project area and the city at large. The workshop engages students with current and future challenges while preserving spatial cultural identity and improving environmental performance of building stock and outdoor spaces' microclimate.

The issues raised in the historic commercial areas, which constitute a distinctive part of the urban fabric, closely link the notions of Cultural Identity, Resilience, and Future Heritage. These entail an elaboration on the evolution of Urban Heritage in the establishment of multifaceted Heritage Sites, where Modern Heritage emerges in areas occupied by Historic Monuments, whereby Tangible and Intangible Heritage retain equal importance for the preservation of cultural identity. Workshop participants focus on Restoration but also on Regeneration principles, on warranting the Continuation of Uses but also on Adaptive Reuse and ultimately on the possibility of ensuring an environmentally sustainable and resilient urban area that can benefit from the application of Nature based Solutions for Microclimate Improvement.

### Course illustration.



## RELATION TO IO3 STATEMENTS

### NOTIONS

- Resilience
- Cultural identity
- Cultural heritage
- Urban patterns
- Urban narratives

### HERITAGE TYPES

- Urban heritage
- Modern heritage
- Tangible and intangible heritage
- Monumental heritage
- Emerging heritage

### DESIGN APPROACHES

- Passive / Active sustainable design
- Recycling / Upcycling
- Renewable energy integration
- Community Building and Representation
- Temporary planning and meanwhile spaces

### DESIGN ACTIONS

- Restoration
- Regeneration
- Redevelopment
- Adaptive reuse
- Continued use
- Public Advocacy for Social Participation
- Cultural and Collective Memory
- Nature based solutions
- Microclimate improvement

### TOOLS

- Data logger
- Mapping, Documenting and Cataloguing
- Thermal/energy simulation
- Lighting simulation
- Post occupancy evaluation
- Artistic approaches
- Heritage Value Matrix

## ≡ Course Syllabus

Historic urban commercial areas constitute exemplary continuation of use in city centres and their occupancy patterns are shaped by social, economic, political, and cultural changes and gradually evolving urban public and private spaces. The workshop process includes three distinct parts: a. an initial online introduction with lectures by experts and project information distribution to the students, b. the main workshop phase realised with live participation of students and tutors on site, which includes visits to the project area, student teams formulation, lectures and conversation with climate change experts and local authorities and stakeholders, studio design work, project results presentation and crit with international audience, and c. a second online phase with follow-up crits by the workshop tutors, after the final presentation for project completion and finetuning.

The main workshop design phase methodology includes site analysis, heritage value analysis, climate analysis and environmental design strategies, restoration, conceptual development of urban regeneration, cultural identity integration in the design proposals - both in urban and building scale.

In order to contemplate on the workshop objectives linking sustainability notions and heritage types in the study site, student participants form three teams, each of which focuses on a specific approach, distinct but complementary, in an effort to compose future sustainable and resilient scenarios for the area. The three approaches stem from the main components of the project site: the historic commercial buildings' fabric and interiors, the background building blocks, the routes and paths within and around the study area. Proposals must consider short term and long-term future scenarios and changes which may emerge due to socioeconomic developments, environmental parameters and climate change effects and will incorporate pertinent adaptation potential for the urban environment.

### TEACHING METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Specific international bibliography

### TEACHING FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- ▶ Written Exam
- ▶ Oral Exam
- ▶ Other

### ▶ **Demonstration of the syllabus coherence with the course objectives**

The workshop views the historic or traditional commercial areas of urban centres as a resource in attaining social, economic, cultural and environmental sustainability goals as well as resilience for the parent city at large. The case study project will employ sustainability and resilience indicators to build upon and evaluate existing conditions of the built environment, past design interventions but also occupant triggered bottom-up approaches and cultural activities. Participants will be challenged with issues of cultural identity, occupancy and land use, the environmental performance of historic and contemporary urban fabric, the requirements for restoration and upgrade of the building stock and the redesign of public or private open space areas.

### ▼ **Demonstration of the teaching methodologies coherence with the course objectives**

The workshop process includes experts' lectures, information by local authorities and stakeholders, site visits, studio design work, feedback by tutors, international crit and follow up crits for final project completion. The main workshop design phase methodology includes site analysis, heritage value analysis, climate analysis and environmental design strategies, restoration, conceptual development of urban regeneration, cultural identity integration in the design proposals - both in urban and building scale. The three distinct and complementary approaches to the project site components can be viewed retrospectively as an integrated unified proposal.

The tools utilised for the development of concepts and proposals include site survey, drawings, diagrams and models as well as computational tools to assist the identification and evaluation of heritage types and sustainability challenges in the study area and the assessment of regeneration, environmental performance and resilience strategies of the proposals and future scenarios.

Utilisation of monitoring, simulation methods, quantitative and qualitative indices and targets, to evaluate existing and future conditions may be included as decision making tools within the design process for both built structures and outdoor spaces.

# METHODOLOGY

## ASSESSMENT METHODS

- ▶ Technical drawings
- ▶ Analytic drawings (diagrams)
- ▶ 3D modelling
- ▶ Physical modelling
- ▶ Case Studies
- ▶ Animation
- ▶ Simulation
- ▶ Rendering
- ▶ Other

## ASSESSMENT FORMATS

- ▶ Design Project
- ▶ Presentation
- ▶ Technical report
- ▶ Research paper
- ▶ Essay
- ▶ Written Exam
- ▶ Oral Exam
- ▶ Other

## ▼ COURSE STRUCTURE

- 1 **Workshop Introduction (online):** Introduction lecture, project scope, site presentation, key notions, issues and challenges, outputs, activities schedule. (4h)

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- 2 **Seminar with Lectures on Resilience and Future heritage (online):** Introduction to the seminar, five lectures each one followed by a Q&A session, Debate and Conclusions session. (8h)

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- 3 **Site visit:** Group meeting at the study site, introduction to the greater area, tour at the site, guided tour to neighbouring restored sites and historic buildings, meetings with local authorities and stakeholders. Formulation of three project teams. (6h)

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- 4 **Design Studio Workshop (in studio):** Student teams design work. Lectures by experts on Climate change, future challenges and urban resilience. Communication with Local Authorities/Stakeholders. (8h)

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- 5 **Design Studio Workshop (in studio):** Student teams design work supervised by tutors. (8h)

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- 6 **Design Studio Workshop (in studio):** Student teams design work supervised by tutors. (8h)

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- 7 **Design Studio Workshop (in studio) and Crit (onsite):** Student teams design work supervised by tutors. (4h) Student Workshop Proposals presentation to international crit. (2h)

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- 8 **Workshop crit (online):** Student Workshop Proposals development presentation and evaluation in online crit. (2h)

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- 9 **Workshop crit (online):** Student Workshop Proposals development presentation and final valuation in online crit. (2h)

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- 10 **Workshop crit (online):** Student Workshop Proposals development presentation and final valuation in online crit. (2h)

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- 11 **Design Studio Workshop (online submission):** Workshop results final submission.

☰ LITERATURE

<b>GC1</b>	1.1
	1.2
	1.3
<b>GC2</b>	2.1
	2.2
	2.3
<b>GC3</b>	3.1
	3.2
	3.3
<b>GC4</b>	4.1
	4.2
	4.3
<b>GC5</b>	5.1
	5.2
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<b>GC6</b>	6.1
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<b>GC7</b>	7.1
	7.2
	7.3
<b>GC8</b>	8.1
	8.2
	8.3
<b>GC9</b>	9.1
	9.2
	9.3
<b>GC10</b>	10.1
	10.2
	10.3
<b>GC11</b>	11.1
	11.2
	11.3

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# Kapani Agora | Rehabilitation

## Agora / Αγορά

noun

The market was in ancient Greek and Roman cities the economic administrative social and spiritual center of the city where trade was usually conducted. The central courtyard of the city was an open space where the male inhabitants of the city congregated. In addition to the commercial nature of the city the market was also the place where the ancients discussed political developments.

### STRATEGY



Our strategy is to create recognizable spaces, reinforce structure and help to reorganize the usage of the market. We create a simple built form for the architectural and for the visual organization. We keep podiatry with ground level for the main circulation. There are the basic elements of the main on the ground floor. We keep three dimensional dynamic overall. Because an old building was preserved historical values. The architect is responsible creating structure of movement. We strengthen the view of the structure placed at the previous condition.



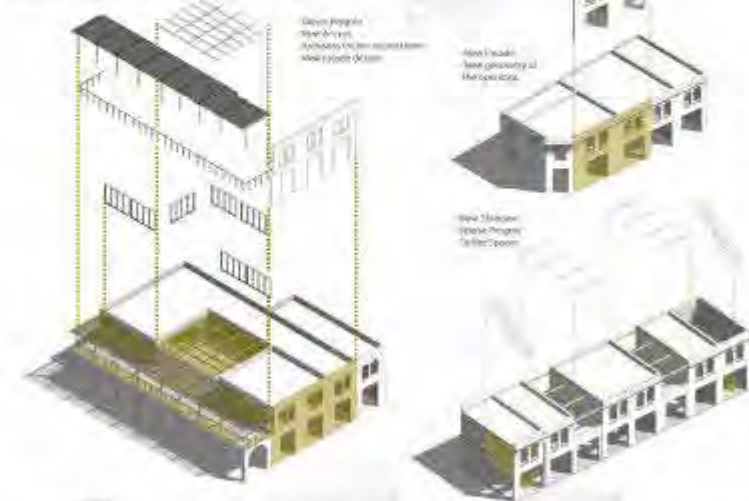
MODULE 4m x 6m



We used the basic structure of the windows and their nature. We create a structure of the building by changing flow morphology and changing their use. Creating raised levels. We level the area on the ground floor and in the center of the market where the area was reserved to used facilities. We add a block structure, while by the other building parts we keep a clear concept. There are three types of morphology analysis results are the advantages of the market. There is the center and there is the center.



### ANALYSIS OF THE THREE TYPES OF THE PROPOSAL FORMATION



Open People  
New Structure  
New Structure

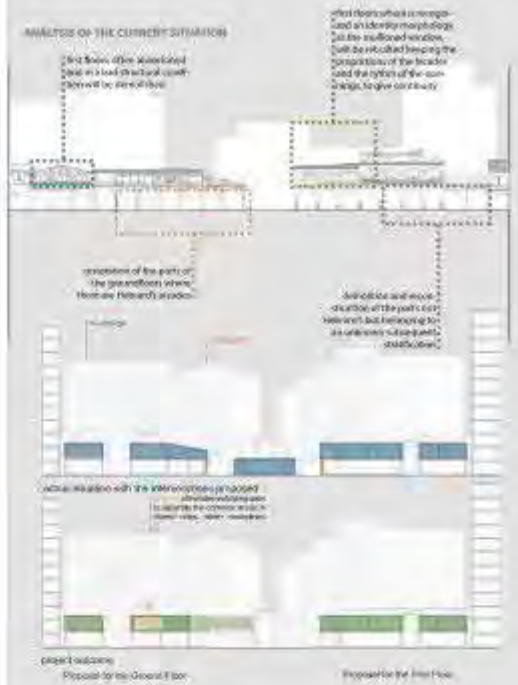
New Structure  
New Structure

New Structure  
New Structure



GROUP 1 | Agora - Market Fabric and Interior

Pfizer, Caladria, Galanatos, Thalia Kofas, Ugois Konic, Orlinca Marozzi, Maria Myriela Mouchi, Acadia Nikou, Maria Tsoukala



### ANALYSIS OF THE CURRENT SITUATION

The main structure of the building is based on a grid of structural columns. It will be reinforced.

Other floors which is reinforced and reinforced structure. On the reinforced structure, both reinforced having the preparation of the facade and the interior of the building, higher continuity.

Structure of the part of the ground floor where the main structure is located.

Structure of the part of the ground floor where the main structure is located. It is reinforced and reinforced structure.

Structure of the part of the ground floor where the main structure is located. It is reinforced and reinforced structure.

Proposed for the ground floor.

Proposed for the first floor.



Co-funded by the European Union  
 CE International Student Workshop | Thessaloniki - Greece  
 Theme: RESILIENCE & FUTURE HERITAGE  
 Case Study: Central Market Area | Thessaloniki  
 HERIUS NUTRI: Iliana Konstantinou, Sakantaris, Alkmini Peka, Kleanthi Asari, Maria Bessis, Angeliki Chetaniomidou, Sofia Kotsopoulos, Stavros Apetios, Natalia Chrysoke, Dimosthenis Sakas, Jordanis Siamidie

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 University of Cyprus // Cyprus  
 Aristotle University of Thessaloniki // Greece  
 University of Seville // Spain  
 Enhancing of Heritage Awareness and Sustainability of Built Environment in Architectural and Urban Design Higher Education

# URBAN INTERACTIONS

## SITE ANALYSIS



## INTERVENTIONS



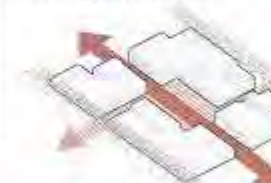
## PROMOTING URBAN INTERACTION

ENHANCING ENTRANCES TO BASKETS THE KAPANI BLDG - CONNECTING NEIGHBOURHOOD MARKETS



## HIGHLIGHTING HISTORIC VALUE

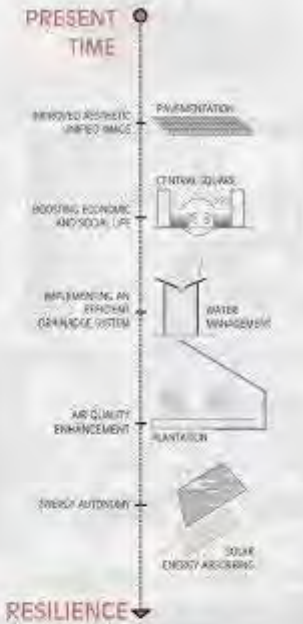
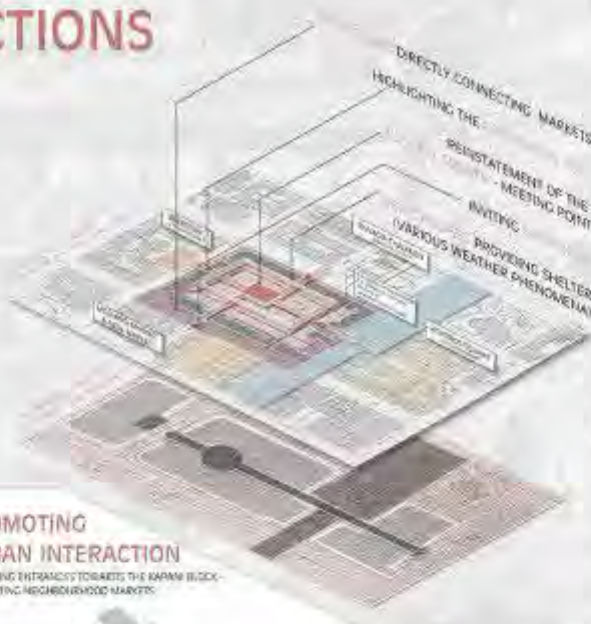
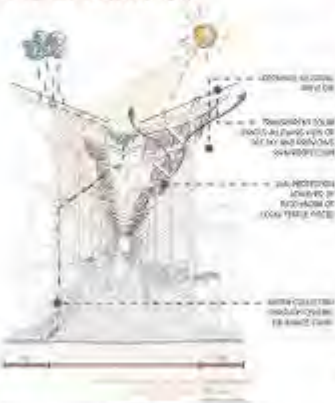
ENHANCING HISTORIC NEEDS OF THE ORIGINAL MAIN WALK PATHWAYS REMAIN OPEN TO THE SKY



## PROMOTING 24/7 ACTIVITY



## USE OF CANOPIES



## CONCEPT

The Kapani market area, in Thessaloniki's city center, is characterized by its strong connection to history, in terms of both tangible and intangible heritage remnants. Contrasting elements compose a feet of "enclosed exterior space, which, at the same time, forms a showcase of diverse, informal, personalized elements that create a rich, and sometimes, overwhelming atmosphere. These two worlds outside the street against the interior, where you ask one to enter another jungle.

Our team's goal is to regenerate and highlight the area, as an important part of the city's history, as well as a social, historical, and key aspect of cultural heritage, vital for urban contemporary life. The main points of interest, focus on reestablishing historic traces found in the area, and introducing new elements (canopies, paving, urban equipment, greenery) that aim to improve market's current functionality and resilience.

The proposal attempts to create a comfortable environment, suitable for both current and future functional, economic, social, and environmental circumstances. To highlight those heritage aspects that are going to be key on maintaining the intrinsic values of the area. Recalling and redefining the past features, so that the new character allows both day and night function, with focus on attracting new users and promoting social interaction of all ages.

Among the specific interventions we find: the design of a new canopy, highlighting the historical site, transforming the section of the lower ground, enhancing the entrances, and the implementation of a central square that will help to articulate and orientate new users.





Line 1: Current skyline



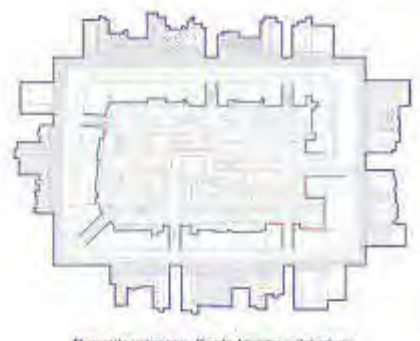
Line 2: New facade closest to the original facade



Line 3: New facade further from the original facade

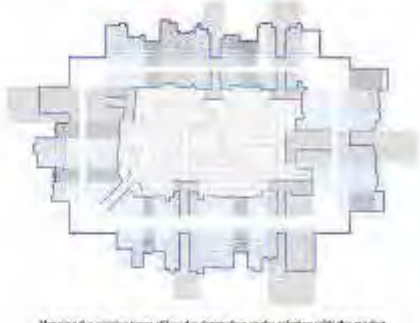


Overlay of the skylines - NEW SKYLINE



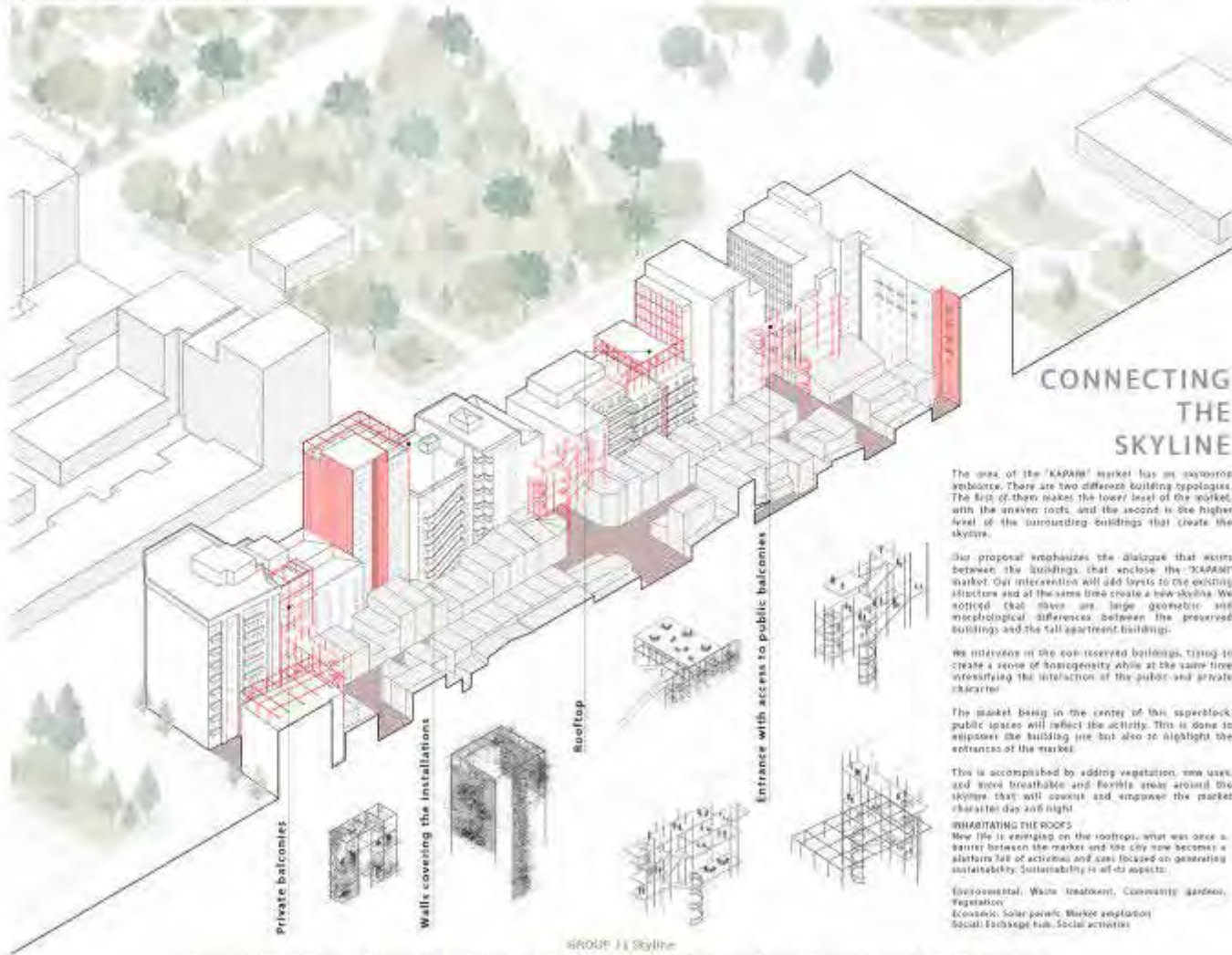
Mapping the existing types of facades depending on their priority

Legend: ■ Current facades, ■ Type 1: Public facades, ■ Type 2: Private facades



Mapping the existing types of facades depending on their relation with the market

Legend: ■ Market, ■ Public, ■ Private, ■ Mixed



## CONNECTING THE SKYLINE

The area of the 'KAPANI' market has an *eclectic* environment. There are two different building typologies. The first of them makes the *lower* level of the market, with the *smaller* roofs, and the second is the *higher* level of the surrounding buildings that create the skyline.

The proposal emphasizes the *dialogue* that exists between the buildings that enclose the 'KAPANI' market. Our intervention will add levels to the existing structure and at the same time create a new skyline. We noticed that there are large *geometric* and *morphological* differences between the preserved buildings and the tall apartment buildings.

Our intention is to *reconnect* the buildings, trying to create a sense of *homogeneity* while at the same time reinforcing the *interaction* of the public and private character.

The market being in the center of this superblock, public spaces will *reflect* the activity. This is done to *encourage* the building use but also to highlight the *entrance* of the market.

This is accomplished by adding *vegetation*, new uses, and *more* breathable and *porous* areas around the skyline that will *connect* and *engage* the market character day and night.

**INHABITING THE ROOFS**  
New life is emerging on the rooftops, what was once a barrier between the market and the city now becomes a platform full of activities and uses focused on generating sustainability. Sustainability is all its aspects:

- Environmental: Water treatment, Community gardens, Vegetation
- Economic: Solar panels, Market expansion
- Social: Exchange hub, Social activities

GROUP 11 Skyline

Francisco Antonio Bragana, Maria Solomou, Ana Diana, Belen Ramirez Lopez, Pedro Conego Miranda, Chryssula Katsikali, Leila Dimichakou

Co-funded by the Erasmus+ Programme of the European Union. Logos of partner institutions: Aristotle University of Thessaloniki, University of Cyprus, University of Belgrade, CREAR, University of Sevilla.

**DEMONSTRATIONS**

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Professor:  
Jelena Živković

Teaching Assistant:  
Marija Cvetković

D01  
**demonstrations**  
book of courses

# DESIGN STUDIO M01U - ECOLOGICAL URBAN DESIGN (PROJECT + SEMINAR)

## COURSE ID CARD

semester	1
ECTS	15+2
status	compulsory

### COURSE POSITION

#### Study program

Master of Architecture -  
Modul Urbanism

#### Level

postgraduate

#### Academic Year

2022-2023

### COURSE TYPES

Lecture

- ▶ Design Studio
- Theoretical Project
- Practical Work
- ▶ Seminar
- Workshop
- Summer School
- Other

### ☰ Course Description

The goal of the Ecological Urban Design Studio course is to help students develop ecological literacy and to apply it in the field of urban design. The work in Studio is conceptualised to enable students to acquire complex and deep awareness, knowledge, and skills to design a place-based ecological urban design project. It is organised through 2 inter-related modules: project and seminar. Studio encompasses theoretical and practical lessons and tasks for group and individual work. Special attention is paid to how the design project connects nature and culture, affirms the cultural and modern heritage, contributes to the identity of the place, meets various recreational needs, and supports the development of the green infrastructure of New Belgrade.

Guest critic and local guide: dr Aleksandra Čabarkapa, assistant professor

Lecturers: dr Nevena Vasiljević, dr Ljiljana Vasilevska, dr Nataša Ćuković- Ignjatović, dr Ana Nikezić, dr Ivana Rakonjac, dr Predrag Jovanović, dr Ana Zorić, dr Marija Cvetković

## DEMONSTRATION 01.

### NOTIONS

- Resilience
- Cultural identity

### HERITAGE TYPES

- Modern Heritage
- Cultural Landscape

### DESIGN APPROACHES

- Environmentally
- Responsive Design
- Climate Sensitive Design
- Green Blue Infrastructure
- Multiscale Design Approach

### DESIGN ACTIONS

- Temporary planning and Meanwhile Spaces
- Nature Based Solutions
- Microclimate Improvement

### TOOLS

- Mapping, Documenting, Cataloguing
- Creative and artistic approaches (photography, video, performance)

### Student

Tamara Mladenović

### Project Title

"Direction Sava"

### Project Description

The project "Direction Sava" aims to create a sustainable and resilient community by integrating principles of ecology and water resilient architecture. By designing buildings, infrastructure, and public spaces that are sensitive to the local environment, the project aims to create a community that is not only functional, but also enhances the natural systems that support it. One of the key aspects of the project is merging water and land ecosystems, creating a seamless integration between the built and natural environments. By focusing on resilience and water sensitive design, it seeks to adapt to the impacts of climate change, such as water level rise and increased frequency of floods. The goal is to create liveable places, regenerative for both people and the planet.



**Figure 01.**  
Sketches\_  
Block 70a New Belgrade



Figure 02. Location, program and concept plan.



Figure 03. "Direction Sava" project \_Areal view

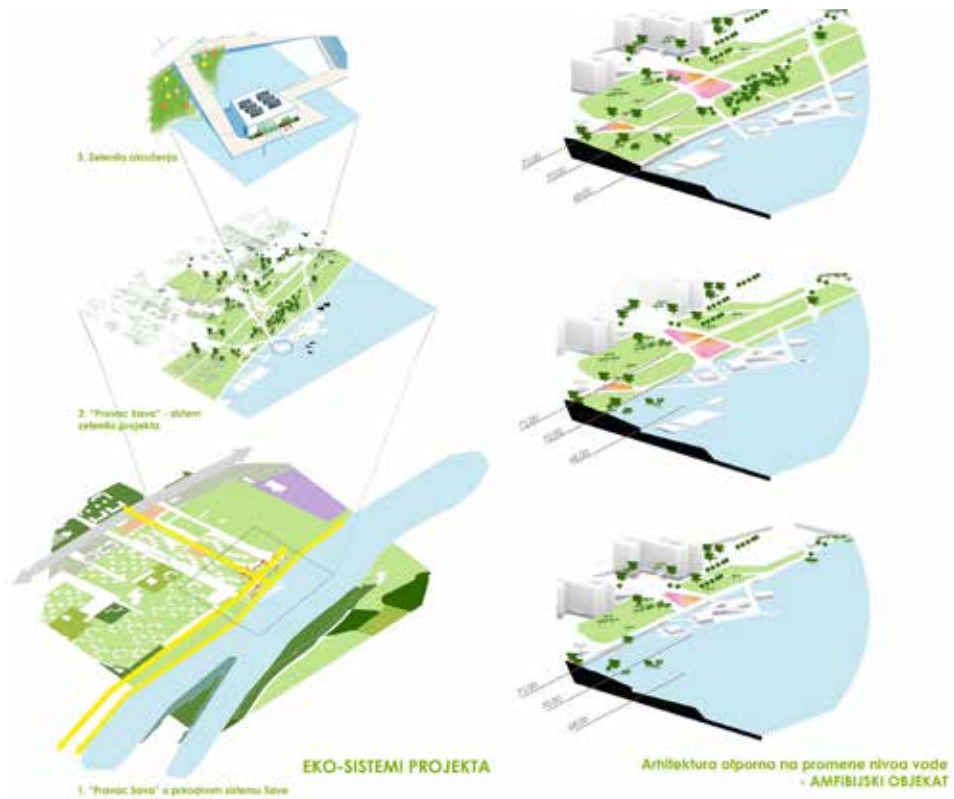


Figure 04. "Direction Sava" project\_Ecosystems and resilience to flood\_ scheme

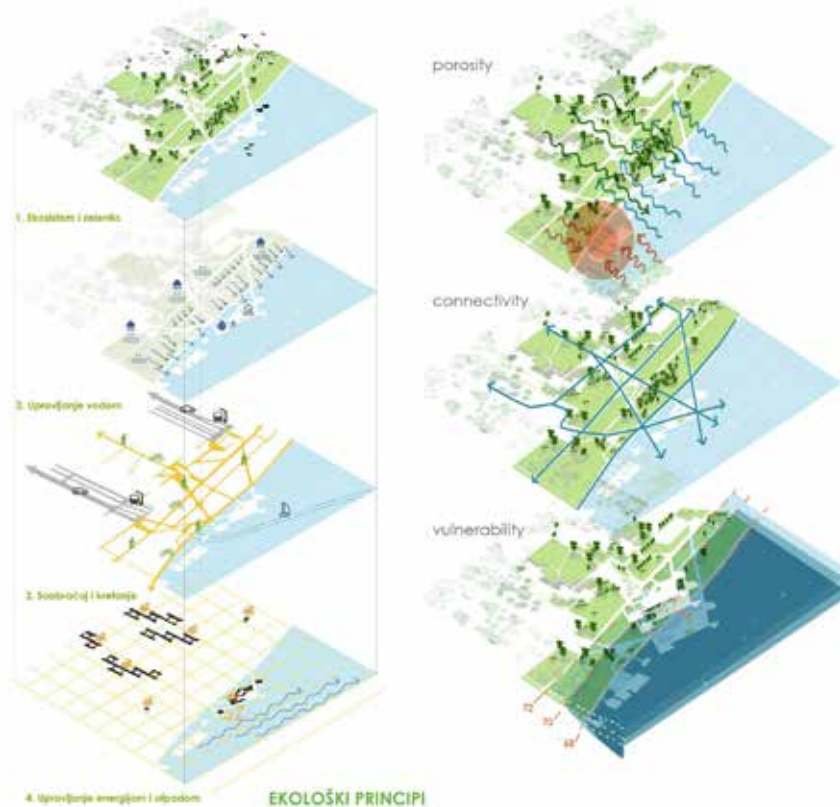


Figure 05. "Direction Sava" project\_Ecological design principles\_ schemes



**Figure 06.** "Direction Sava" project\_View from the river Sava



**Figure 07.** "Direction Sava" project\_View towards Belgrade

## DEMONSTRATION 02.

### NOTIONS

- Resilience
- Cultural identity

### HERITAGE TYPES

- Modern Heritage
- Cultural Landscape

### DESIGN APPROACHES

- Community Building and Representation
- Climate Sensitive Design
- Multiscale Design Approach

### DESIGN ACTIONS

- Temporary planning and Meanwhile Spaces
- Microclimate Improvement

### TOOLS

- Mapping, Documenting, Cataloguing
- Creative and artistic approaches (photography, video, performance)

### ≡ Student

Vanja Vujanović

### ≡ Project Title

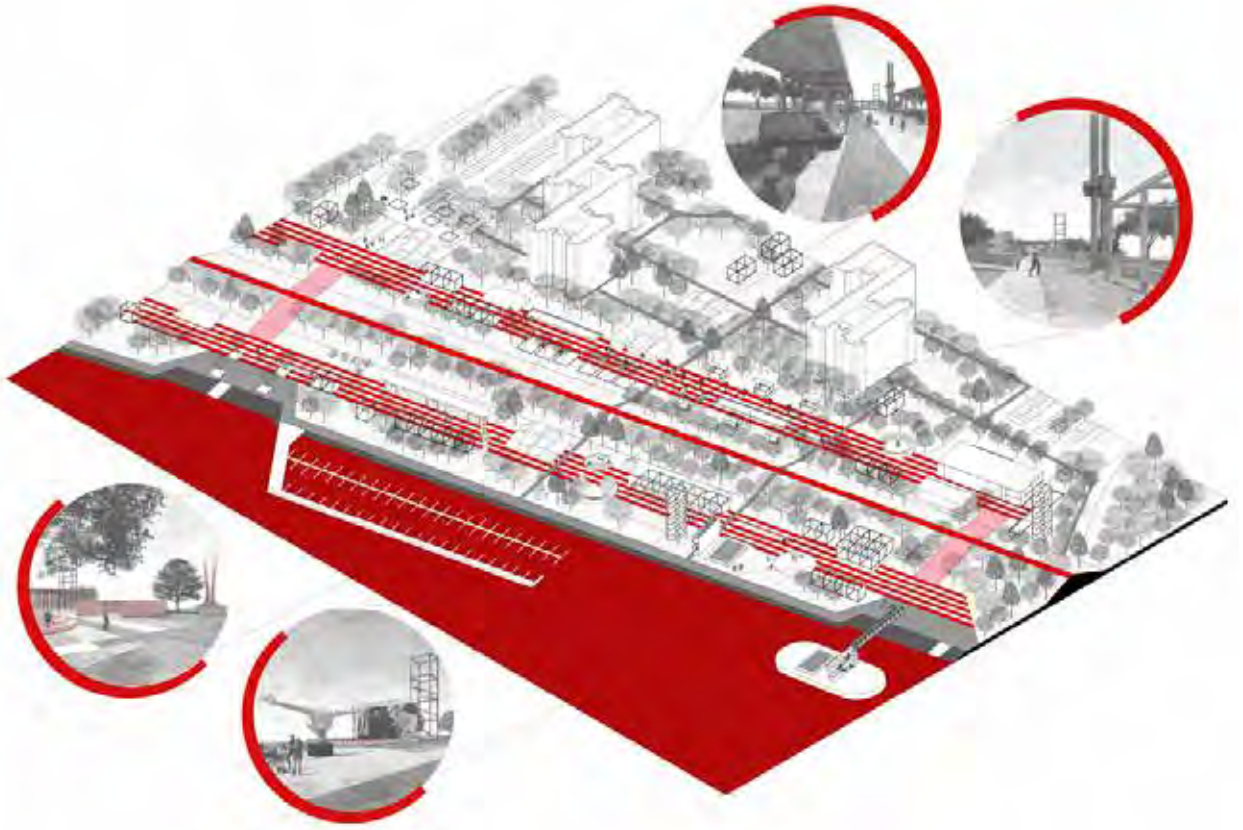
“Art speaks”

### ≡ Project Description

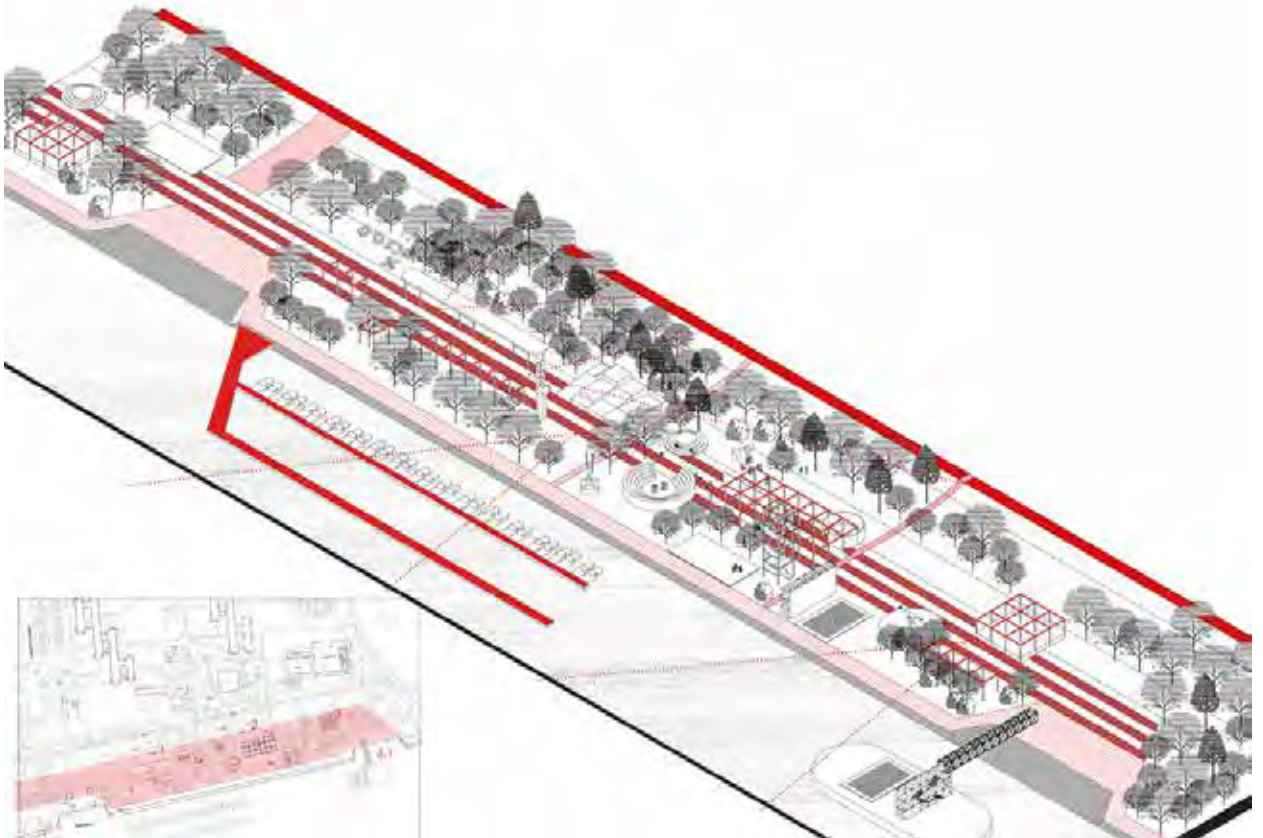
“Art speaks” project aims to connect art, culture and housing communities by forming a cultural and educational complex as focal point and gathering place for inhabitants of block 70a and New Belgrade blocks. The urban regeneration of the riverfront area would open up a training ground for artistic expression in the field of activism to raise awareness of the 'burning' environmental problems we face today. The local citizens would get the opportunity to express their opinion by using redesign and ready-made methods. Improved protection of the rich modernist heritage and its preservation is another pillar of this project, as well as the creation of new values that contribute to the construction and strengthening of the civil society in the environment that is favourable to various contemporary cultural scene actors who act upon it.



**Figure 01.**  
Horizontal plan -  
the scope of intervention



**Figure 02.** Axonometric preview with ambient sequences.



**Figure 03.** Axonometric preview.

## DEMONSTRATION 03.

### NOTIONS

- Resilience
- Cultural identity

### HERITAGE TYPES

- Modern Heritage
- Cultural Landscape

### DESIGN APPROACHES

- Environmentally Responsive Design
- Community Building and Representation
- Multiscale Design Approach

### DESIGN ACTIONS

- Nature Based Solutions
- Microclimate Improvement

### TOOLS

- Mapping, Documenting, Cataloguing

### ≡ Student

Uroš Marković

### ≡ Project Title

“The Ornithology Research Centre”

### ≡ Project Description

The project is based on research that indicates inextricable links between the well-being and the environment, and aims to increase human respect for nature. Birds are recognized as an indicator of ubiquitous imbalances in nature – therefore imbalances in the community. The Ornithology Research Centre is designed with the idea of spreading awareness about key problems of the urban bird population and works on finding solutions. The new complex is designed to integrate with modernistic structure of New Belgrade. The intervention’s positive outcomes may lead to strengthening the fragile balance of the urban ecosystems and improving the quality of life in Belgrade. New, more educated generations would continue the cycle of respect.



**Figure 01.**  
Ambient preview.

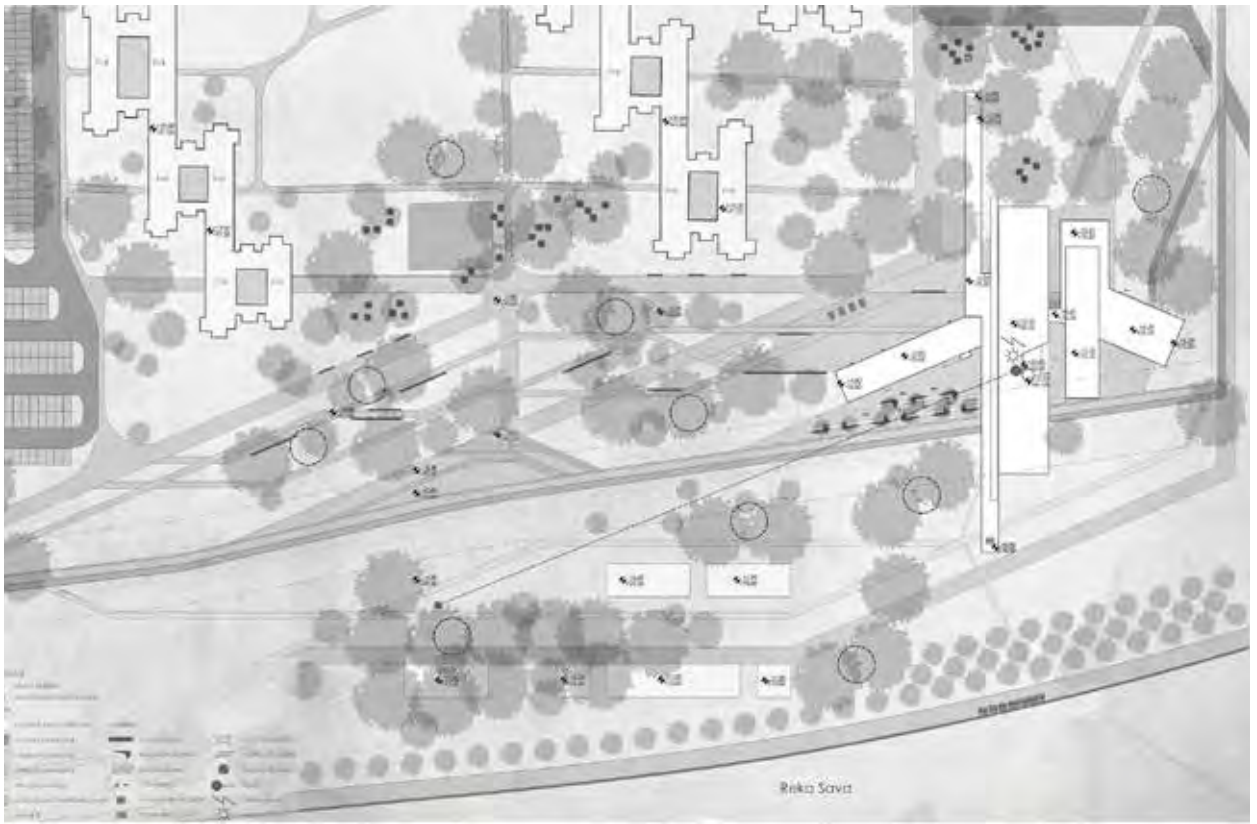


Figure 02. Horizontal plan of proposed conceptual solution.



## DEMONSTRATION 04.

### NOTIONS

- Resilience
- Cultural identity

### HERITAGE TYPES

- Modern Heritage
- Cultural Landscape

### DESIGN APPROACHES

- Environmentally Responsive Design
- Community Building and Representation
- Green Blue Infrastructure
- Multiscale Design Approach

### DESIGN ACTIONS

- Temporary planning and Meanwhile Spaces
- Microclimate Improvement

### TOOLS

- Mapping, Documenting, Cataloguing
- Artistic approaches (photography, video, performance)

### Student

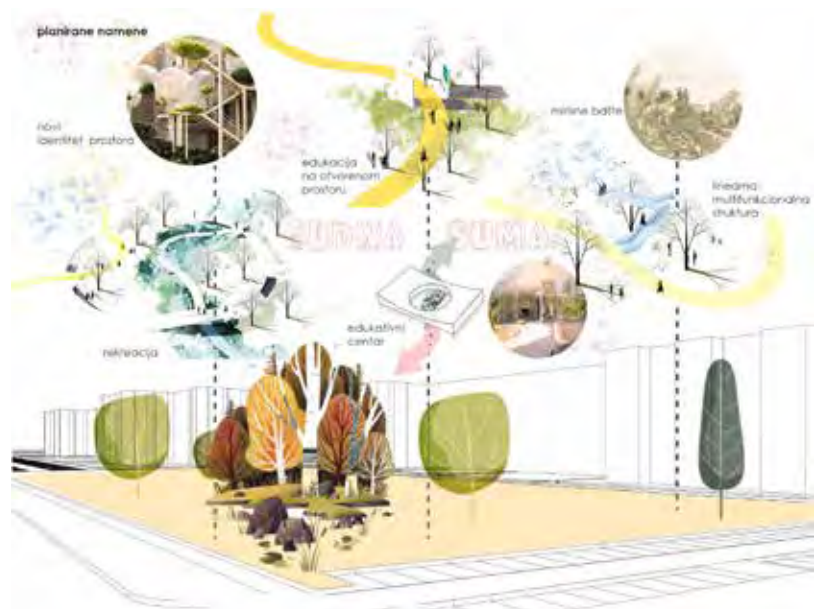
Ivana Savić

### Project Title

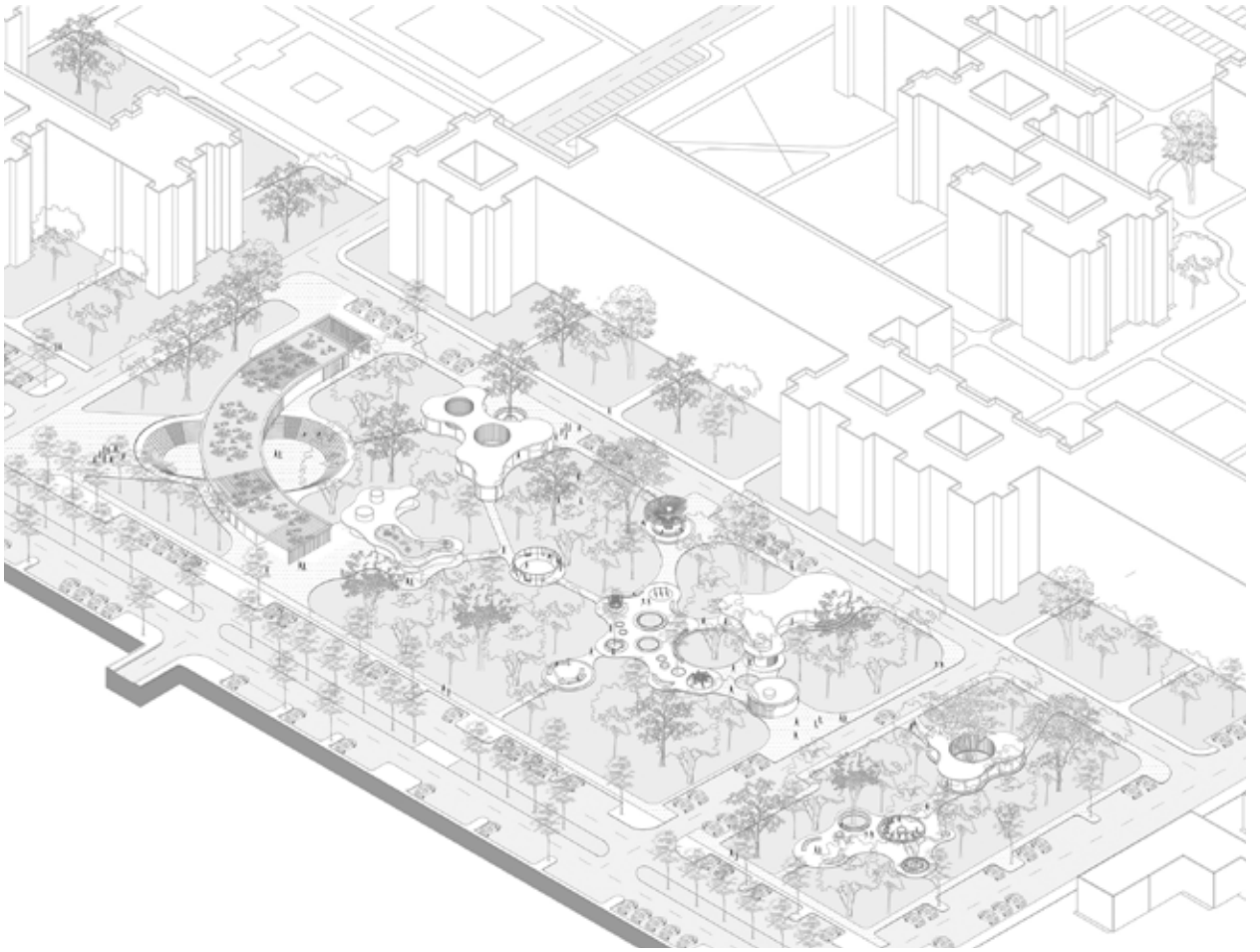
"Strange forest"

### Project Description

The "Strange forest" project aims to preserve and improve the green oasis of New Belgrade Block 70a through the revitalization of the space and its better integration into community life. Open, semi-open and closed spaces for educational and recreational purposes are introduced with the unhindered influence on the already existing natural environment in order to improve the quality of time spent in nature. Project design is characterised by organic shapes and forms that follow the modernist tradition of "living in a park". Paths, areas and pavilions contribute to the quality of space through implementation of various ecological measures, such as use of recycled materials, regenerative use of natural resources and water-sensitive design. In this way, Block 70a aims to become a new green ecological oasis of the Sava blocks.



**Figure 01.**  
Conceptual proposal - collage.



**Figure 02.** Axonometric preview.



**Figure 03.** Ambinet preview.

## DEMONSTRATION 05.

### NOTIONS

- Resilience
- Cultural identity

### HERITAGE TYPES

- Modern Heritage
- Cultural Landscape

### DESIGN APPROACHES

- Environmentally Responsive Design
- Community Building and Representation
- Multiscale Design Approach

### DESIGN ACTIONS

- Nature Based Solutions
- Microclimate Improvement

### TOOLS

- Mapping, Documenting, Cataloguing

### ≡ Student

Nikola Marković

### ≡ Project Title

"Evolution"

### ≡ Project Description

The goal of the "Evolution" project is to connect the residential part of Block 70a with the promenade along the Sava river and the river itself in a way that enhances relations between people and nature. The link between these areas is the "Ecological workshop", designed as a research and educational complex with a purpose of educating the local population about urban agriculture, as well as about all the steps they can take in their daily lives to reduce their impact to climate change. The principles of bioclimatic design and various ecological measures have been implemented in a new educational complex and along the new promenade that links Block 70a to the Sava river.



**Figure 01.**  
Detail of urban design.

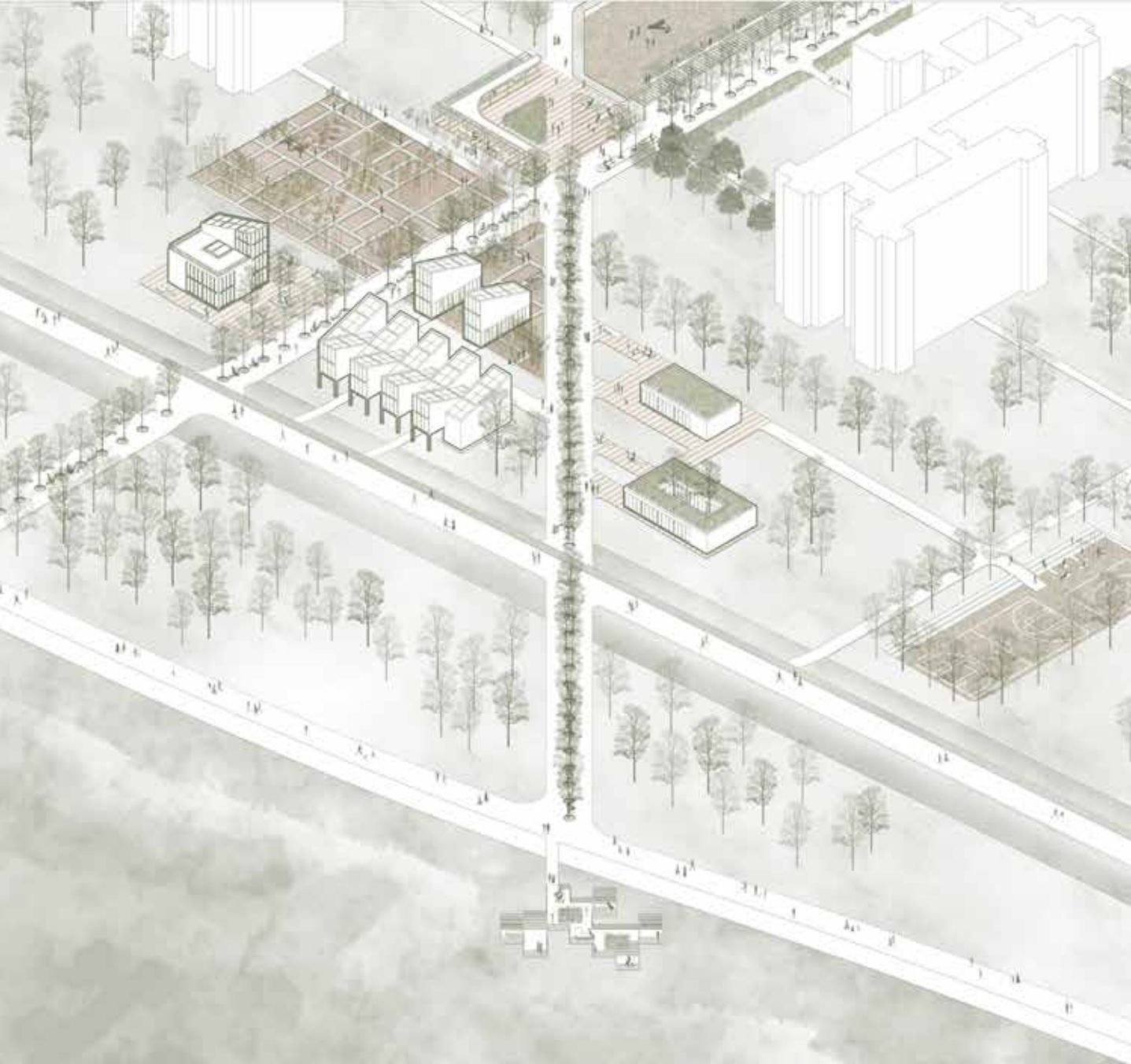


Figure 02. Site plan - axonometric preview.



UBFA

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Professors:  
Vladan Djokić  
Milica Milojević

Teaching Assistant:  
Mladen Pešić

D02

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# DESIGN STUDIO 06U (PROJECT + SEMINAR) POST-INDUSTRIAL LANDSCAPE TRANSFORMATIONS OF THE URBAN ZONE OF SENJSKI RUDNIK

## COURSE ID CARD

semester	8
ECTS	15+2
status	compulsory

### COURSE POSITION

#### Study program

Integrated single-cycle-5-year studies in architecture

#### Level

postgraduate level

#### Academic Year

2020-2021

### COURSE TYPES

Lecture

- Design Studio
- Theoretical Project
- Practical Work
- Seminar
- Workshop
- Summer School
- Other

### ☰ Course Description

The development of the urban matrix of the Senjski Rudnik changed over a long period of time - from the formation of the first pit at the end of the 19th century to its transformations through the first half of the 20th century. Ideas and projects for the reconstruction and revitalization of the mining settlement envisaged the integration of the new functions of the Regional Industrial Heritage Center and the historically built forms. Partially realized plans and projects and the new circumstances of the development of this place actualize the question of form, size, character and program of shaping its center as an ambient unit. Students individually conceive a programmatic and spatial intervention that will significantly improve the character of the center of the settlement. Through the development of a segment or a representative building, the measure and character of the intervention is sought - to provide the new contents a contemporary architectural expression and a framework suitable for a small-scale settlement.

## DEMONSTRATION 01.

### NOTIONS

- Urban Patterns
- Cultural identity

### HERITAGE TYPES

- Industrial Heritage
- Cultural Landscape

### DESIGN APPROACHES

- Visual Comfort Design

### DESIGN ACTIONS

- Rehabilitation

### TOOLS

- Mapping, Documenting, Cataloguing

### ≡ Student

Nenad Žujović

### ≡ Project Title

Auditorium / Annex of the Coal Mine Museum in Senjski Rudnik

### ≡ Project Description

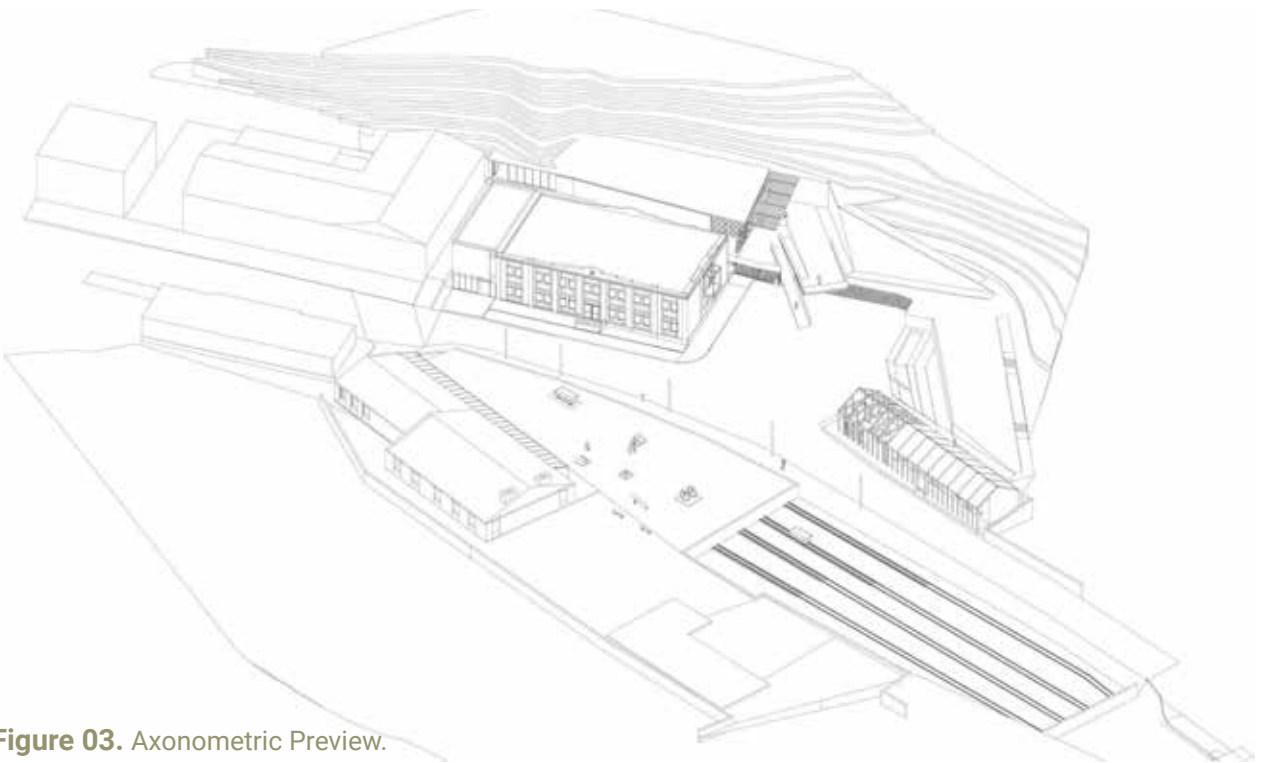
The main idea is based on the revitalization of the space within the Coal Mine Museum in Senj. On the one hand, additional content has the role of completing the museum's program, and on the other hand, to accentuate the space of the former loading station. During the last century, the loading station was an important place for this settlement, as well as for the miners, because the coal was sorted in this very place, and then transported from there. The implementation of new, open spaces, on several levels, enables the perception and emphasis of the space of the loading station, but also the space of the former workshop. The annex of the museum is a part of the intervention which has the role of enabling the perception of the history and culture of the Senj mine through a new, visual format. The upgrade of the archive building served as a reading room, enabling the local population and visitors to see the history of this settlement through a written format. Open spaces that are developed on several levels, represent a link between the already mentioned elements of intervention, emphasizing the perception of the wider space around the museum, but also representing a kind of deviation from all of the above, as well as space for recreation.



**Figure 01.**  
Site plan.



**Figure 02.** Horizontal Plan - The scope of Intervention.



**Figure 03.** Axonometric Preview.

## DEMONSTRATION 02.

### NOTIONS

- Urban Patterns
- Cultural identity
- Cultural and Collective Memory

### HERITAGE TYPES

- Industrial Heritage
- Cultural Landscape

### DESIGN APPROACHES

- Multiscale Approach

### DESIGN ACTIONS

- Developing Cultural Routes and Itineraries

### TOOLS

- Mapping, Documenting, Cataloguing

### ≡ Student

Teodor Jovanović

### ≡ Project Title

Changing Perspective - Monument for Mining Settlement

### ≡ Project Description

The identity of the place was made up of different infrastructure systems, i.e. transportation systems that made it possible to see the place itself from a different perspective. View in the driveway, view from a distance. The project is located on the "karst", a rocky point that dominates the settlement. The entire Senjski Mine can be seen from this place, and it is also very important for the local population. A monument was designed that would remind of the existence of industry and would connect industrial settlements. As part of this project, the local population can participate as a transmitter of the real situation and memories of the period of industrialization. The topic of the object is directly related to the place, it additionally explains the place itself, as well as connects it with other industrial settlements.



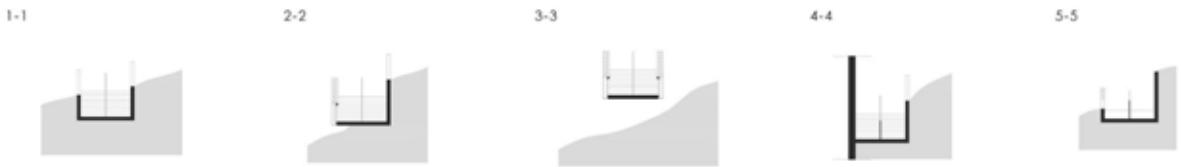
**Figure 01.**  
Site plan - the scope of wider context.

**Figure 02.**  
Site preview - collage.





**Figure 03.** Site plan - the scope of intervention.



**Figure 04.** Characteristic sections.



**Figure 05.** Collage - Viewpoint.

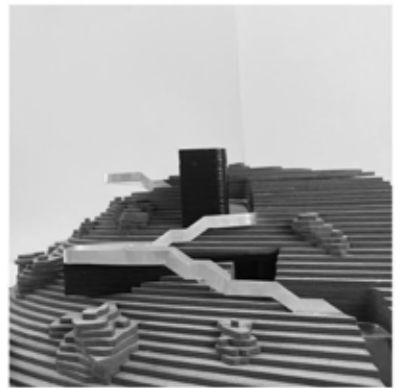
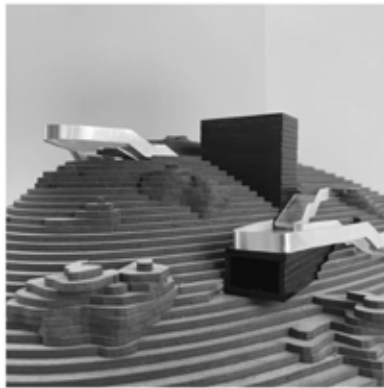
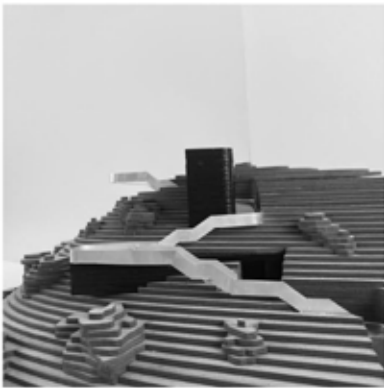
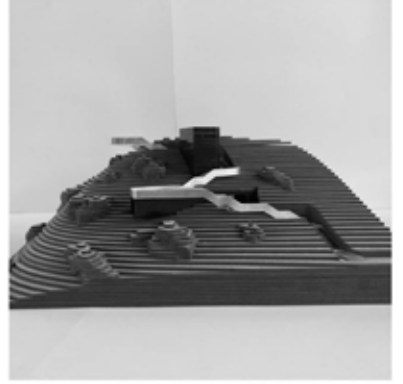
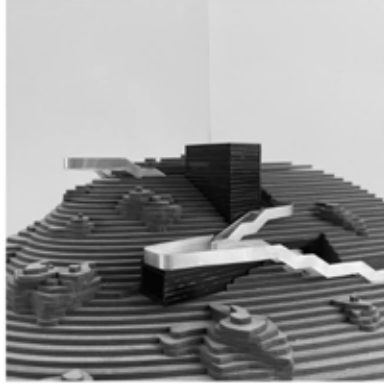
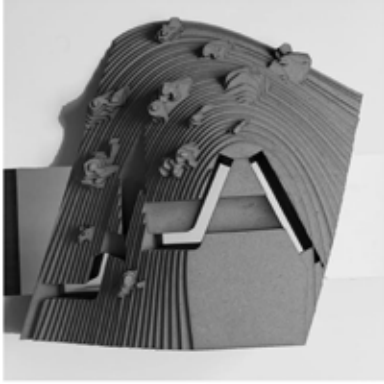
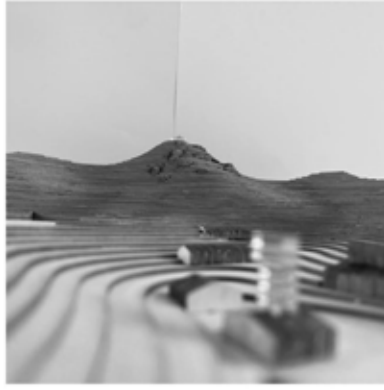
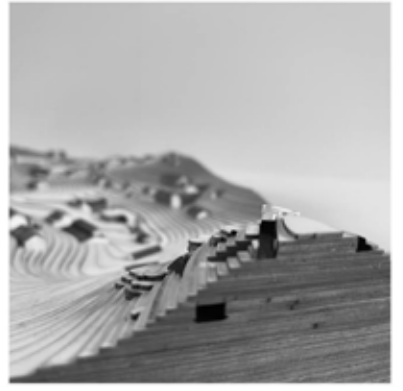
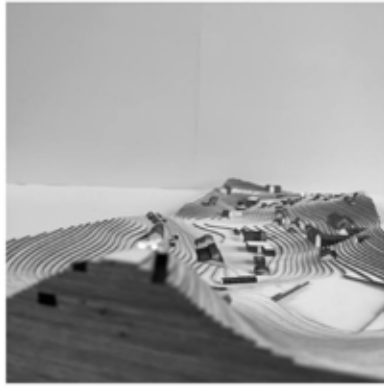
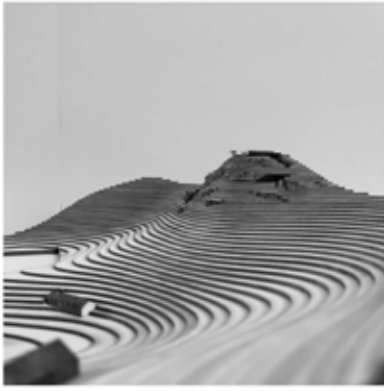


Figure 06. Physical Modelling.

## DEMONSTRATION 02.

### NOTIONS

- Urban Patterns
- Cultural identity

### HERITAGE TYPES

- Industrial Heritage
- Cultural Landscape

### DESIGN APPROACHES

- Design for All in Cultural Heritage

### DESIGN ACTIONS

- Adaptive Reuse

### TOOLS

- Mapping, Documenting, Cataloguing

### ≡ Student

Andrijana Đukić

### ≡ Project Title

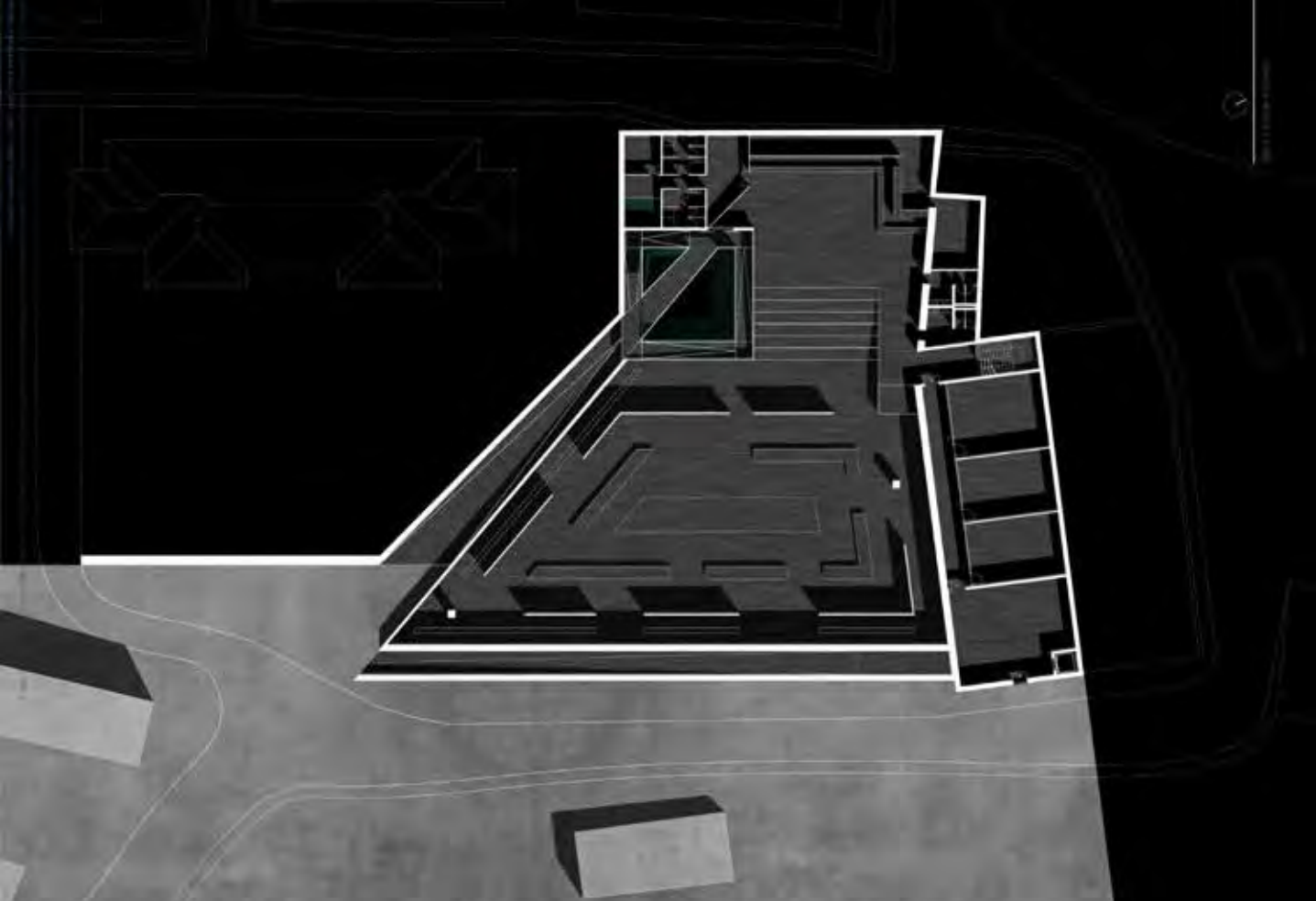
Miner's bathroom - Diving center in Senjski rudnik settlement

### ≡ Project Description

The miner's bathroom used to be an important part of not only the miner's everyday life, but also the social life of the settlement. Through a different spatial interpretation of this term, a specific content would be created that could contribute to the revitalization of the place, at the same time validating the importance of the mining bath as part of the industrial heritage. The intervention space is located on the site of the former Terrace of the Miners' Club, including the Home for Engineers and the elementary school. The project includes space for divers, including deep diving and hotel accommodation, as well as exhibition space for visitors. The goal of the project is to revitalize the existing buildings to a great extent, affirming the importance of the selected buildings for the local population. In addition, new programs could engage the local community through new jobs as well as new gathering places. Due to the specificity of the place itself and the preservation of its spirit, the intervention largely includes the reconstruction and conversion of existing buildings. The home for engineers and the primary school retain their original appearance, while a new form is defined within the boundaries of the terrace.



**Figure 01.**  
Site plan - the scope of wider context.



**Figure 02.**  
Characteristic  
Horizontal plans.



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Professors:  
Vladan Djokić  
Milica Milojević

Teaching Assistant:  
Mladen Pešić

D03

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# FINAL MASTER STUDIO - U (THESIS + PROJECT) PROJECT OF THE INTERPRETIVE CENTER OF THE ADRIATIC

## COURSE ID CARD

semester	10/4
ECTS	15+2
status	compulsory

### COURSE POSITION

#### Study program

Integrated single-cycle-5-year studies in architecture; Master of Architecture - Modul Urbanism

#### Level

postgraduate level

#### Academic Year

2021-2022

### COURSE TYPES

Lecture

- ▶ Design Studio
- Theoretical Project
- Practical Work
- Seminar
- Workshop
- Summer School
- ▶ Thesis

### ☰ Course Description

Hidden routes, cultural heritage and natural peculiarities of the Adriatic are the topics that will inspire the projects of the interpretive center. The project of the facility or complex on two spatial polygons of the coastal and continental part (Herceg Novi and Kolašin) is based on the research of modern and unconventional programming solutions for this type of content. In the morphological sense, the relationship between land and water surfaces, the shaping of the object and the soil as a kind of place from which new ways of learning about the Adriatic Sea, the Mediterranean and the cultures developed on its shores and islands are opened.

## DEMONSTRATION.

### NOTIONS

- Cultural identity

### HERITAGE TYPES

- Heritage Sites
- Cultural Landscape

### DESIGN ACTIONS

- Redevelopment
- Developing Cultural Routes and Itineraries

### TOOLS

- Mapping, Documenting, Cataloguing

### ≡ Student

Andrijana Đukić

### ≡ Project Title

Crystallization of the City Voids

### ≡ Project Description

Crystallization of the void is interpreted as an architectural action on the void and the creation of a new, different spatial experience and identity of the same. The Citadel of Mezzaluna crystallizes through reconstruction and the creation of a new function with the aim of its revitalization and reintegration into city life. Architectural activity is concentrated in the citadel itself and its immediate surroundings. The circular form envelops the citadel, placing it in the center and thus emphasizing its importance. At the same time, it directs the user's movement, allowing him to go out on and under the water surface, thus enhancing his experience of the Adriatic. The remains of the fortification form a spatial framework of action in which, through the provision of the necessary infrastructure, a multi-purpose space intended for installations of different character is created. The reconstruction of the walls is carried out through the reinterpretation of the existing, so that the glass prisms are arranged like a stone stack of walls, thus creating a former form and a unique atmosphere.

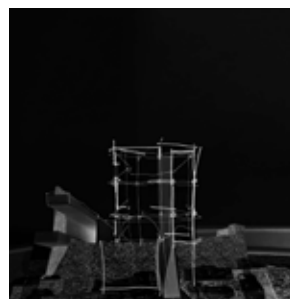
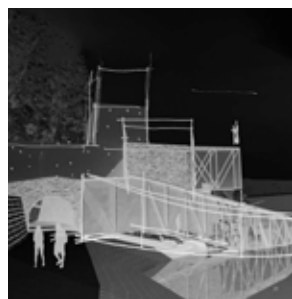
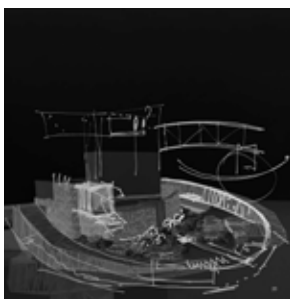


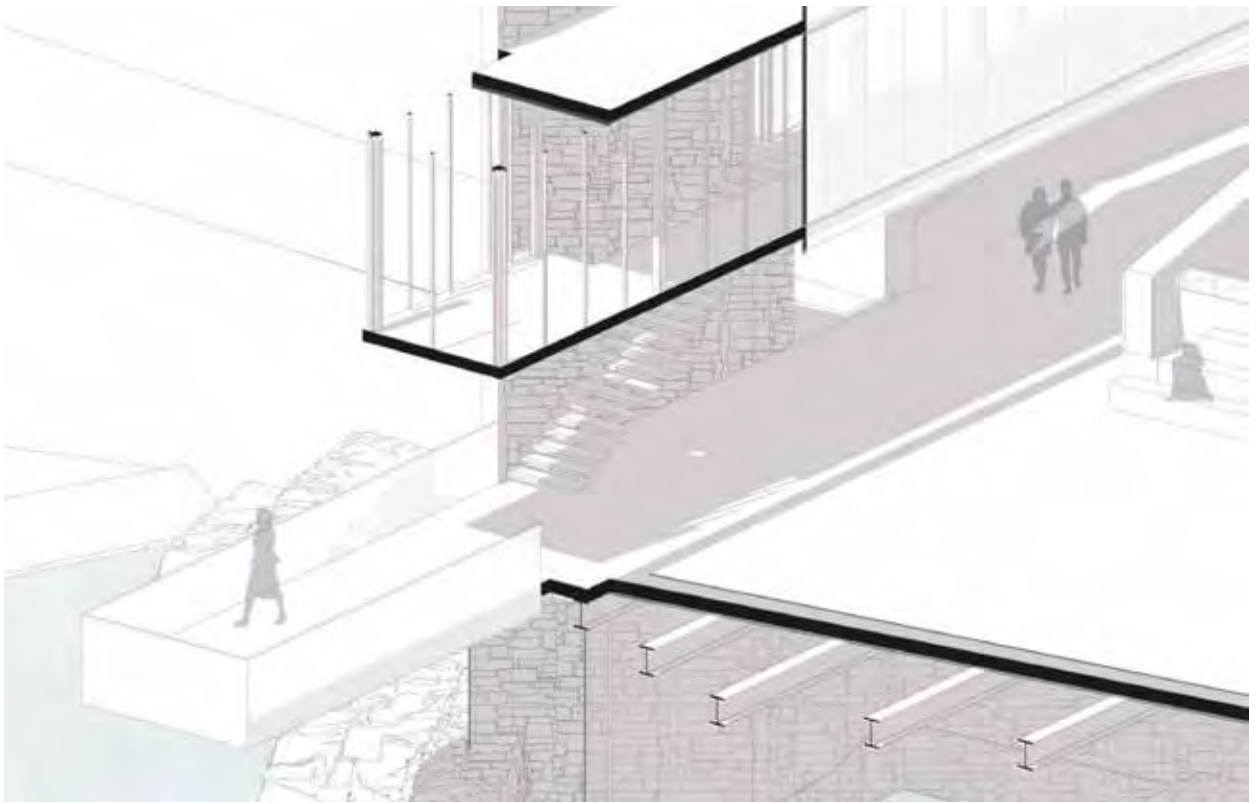
Figure 01. Conceptual Sketches.



**Figure 02.** Site Plan - The scope of Intervention.



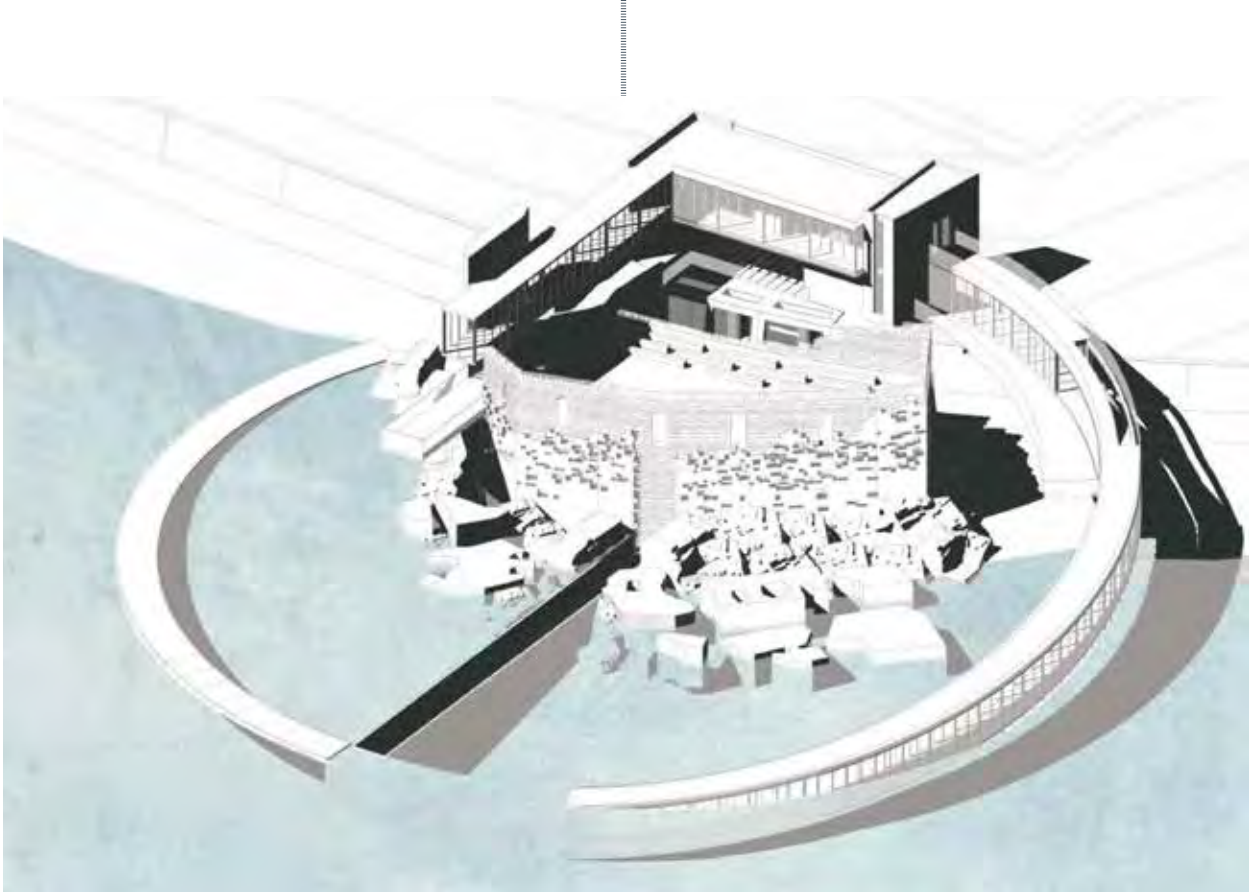
**Figure 03.** Characteristic Elevation.



**Figure 04.** Characteristic Detail.



**Figure 05.** Ambinet sequence.



**Figure 06.** Axonometric View.





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Professors:  
Ana Nikezić  
Jelena Ristić Trajković

Teaching Assistant:  
Aleksandra Milovanović

D04

**demonstrations**  
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# DESIGN STUDIO M02A - HERITAGE REPROGRAMMING (PROJECT + SEMINAR)

## COURSE ID CARD

semester	2
ECTS	15+2
status	compulsory

### COURSE POSITION

#### Study program

Master of Architecture -  
Modul Architecture

#### Level

postgraduate level

#### Academic Year

2020-2021  
2021-2022

### COURSE TYPES

Lecture

- ▶ Design Studio
- Theoretical Project
- Practical Work
- ▶ Seminar
- Workshop
- Summer School
- Other

### ☰ Course Description

The studio activities are focused on the search for the formats of leisure culture and their program articulation in contemporary architectural and urban typologies. Through multiscale and problem-based research, students will look for architectural programs that can generate sustainable technology for everyday life. The goal is to empower students with design methods for contemporary reprogramming of heritage through work on the spatial scope of the modernist heritage of New Belgrade (2020-2021) and industrial heritage of Third Belgrade (2021-2022). In this project, architecture will not be the ultimate goal, but a means through which the present is questioned and the future is built, opening through wider critical topics such as urban narratives, identities and formats, as well as economic, ethical, social and spatial values of cultural practices in the city.

The theoretical part of the studio is developed through active discussion and critical reflection on key concepts and phenomena that determine the assignment: cultural leisure, urban generator, environmental-behavioral paradigm of modern life in the city. The role and position of architecture as an instrument that generates various forms of social interaction are explored. Sustainable design strategies for reprogramming heritage in the contemporary city are especially studied.

Practical teaching is based on research through design, relying on a "place-based" methodology that views a specifically chosen space as a holistic phenomenon. First of all, the program and spatial framework of contemporary leisure culture will be examined. Then a framework for redefining the city leisure-man relationship will be formed. In the end, the subject of the project is the spatial interpretation of the previous two steps through the conceptual architectural design.

## DEMONSTRATION 01.

### NOTIONS

- Cultural and Collective Memory

### HERITAGE TYPES

- Modern Heritage
- Urban Heritage

### DESIGN APPROACHES

- Heritage Reprogramming
- Community Building and Representation

### DESIGN ACTIONS

- Adaptive Reuse
- Heritage Value Matrix

### TOOLS

- Mapping, Documenting, Cataloguing

### ≡ Student

Una Obradović

### ≡ Project Title

RE:STITUTION

### ≡ Project Description

The question of the survival of a formally political institution is raised, as well as the observation that it as such no longer greatly affects people's lives. What is further imposed as a potential solution is the reprogramming of the form in which the institution appears and the creation of a new typology, which manifests itself in the form of a public place. The tower reprogrammed into an institution then becomes a stage that gives people back the right to engage around issues of their own environment, calls for debates, conflicts, promotion of values and creates options that enable interaction between people and space. Thus, the tower as a place of cultural significance becomes a place of cultural expression in which people are engaged in creating a new culture, in the broadest possible sense. Potential scenarios are further encouraged by creating spaces in the form of "collages" and clips composed of elements of existing spaces that people can identify with.

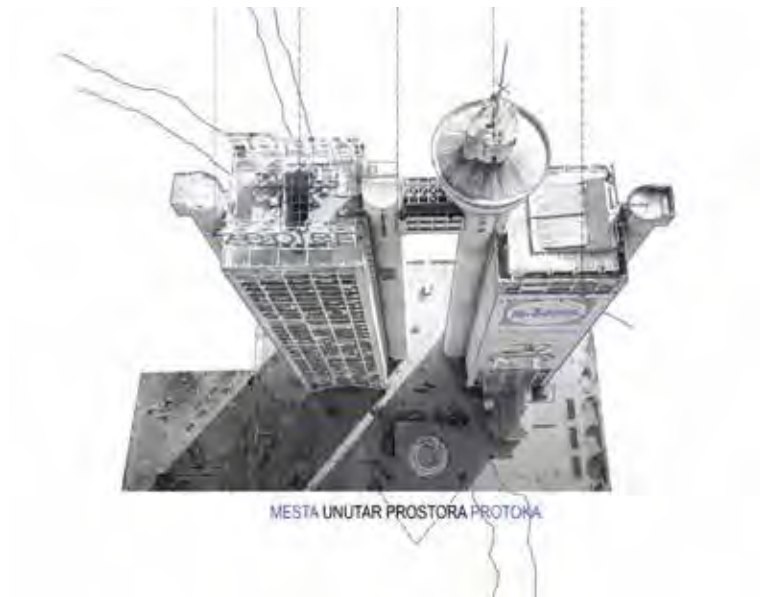


Figure 01. Conceptual Collage.



## DEMONSTRATION 02.

### NOTIONS

- Cultural and Collective Memory

### HERITAGE TYPES

- Modern Heritage
- Urban Heritage

### DESIGN APPROACHES

- Heritage Reprogramming
- Community Building and Representation

### DESIGN ACTIONS

- Adaptive Reuse
- Heritage Value Matrix

### TOOLS

- Mapping, Documenting, Cataloguing

### ≡ Student

Dunja Dedić

### ≡ Project Title

MISE-EN-AMÎBE

### ≡ Project Description

By overthrowing ideology, boundaries have been broken: Genex becomes a lonely observatory. The new boundary is between the real and the simulated, the tangible and the fabricated. The escalation of the postmodern trajectory is not reflected in the hyperreal, but in the hyper-simulacrum. The production of space becomes a prefabrication of reality, so separate from the marked that its authenticity is undoubtedly read, but also a place of stimulation of the senses, overemphasized reality as a point generated by the program, creating flexible spaces. Mise-en-amibe constructs an event inside a frozen frame. The boundary is spaced liminal. The negation of the significance of the Genex building, as a symbol of modernism, destroys the aura of heritage. Thus frozen in limbo, between the modern and the postmodern, Genex continues its life and crosses that boundary.

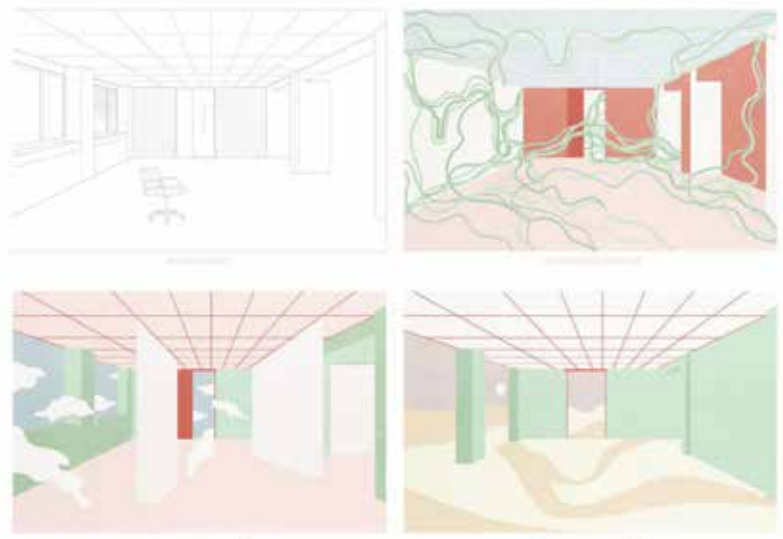


Figure 01. Conceptual Sequences.

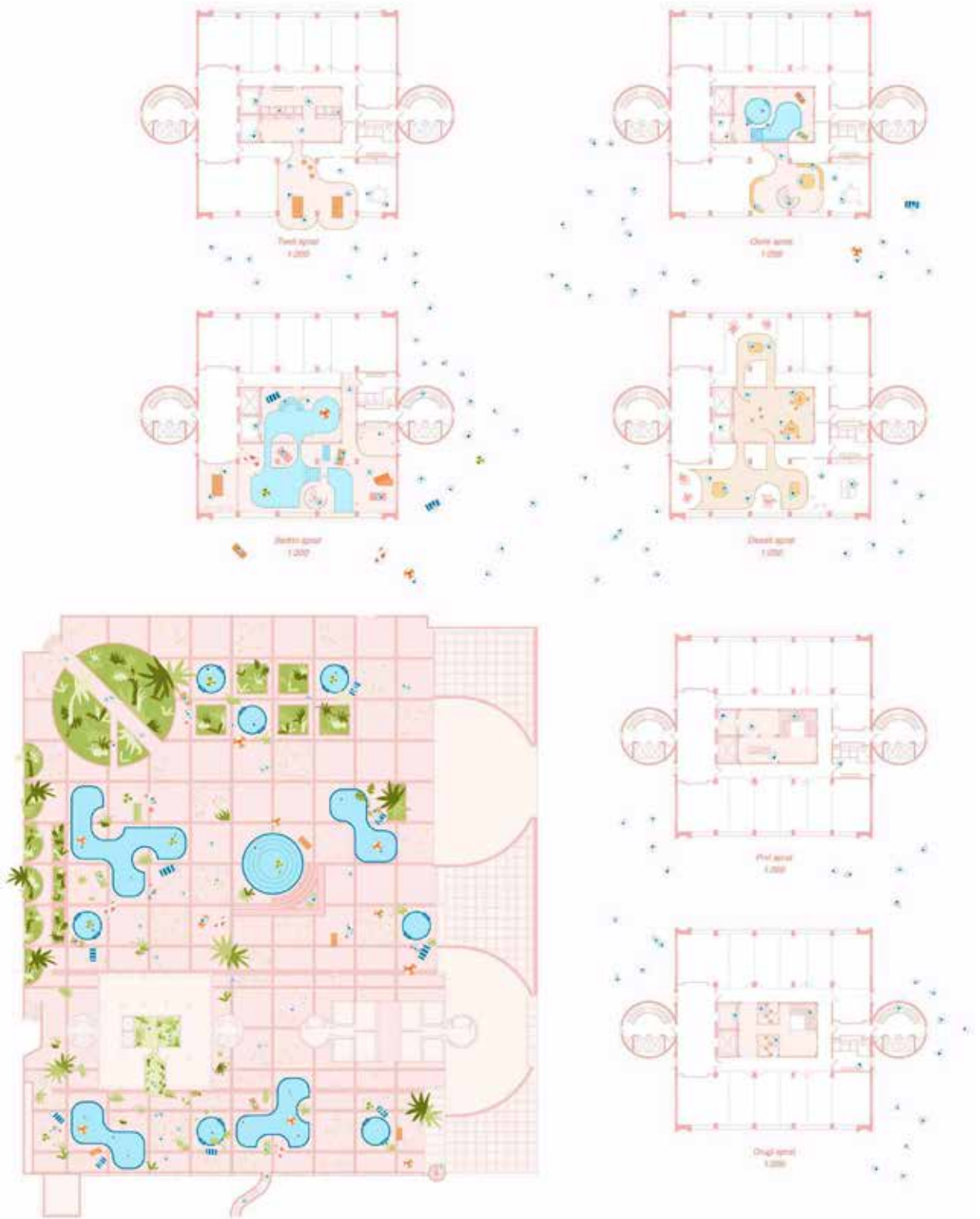
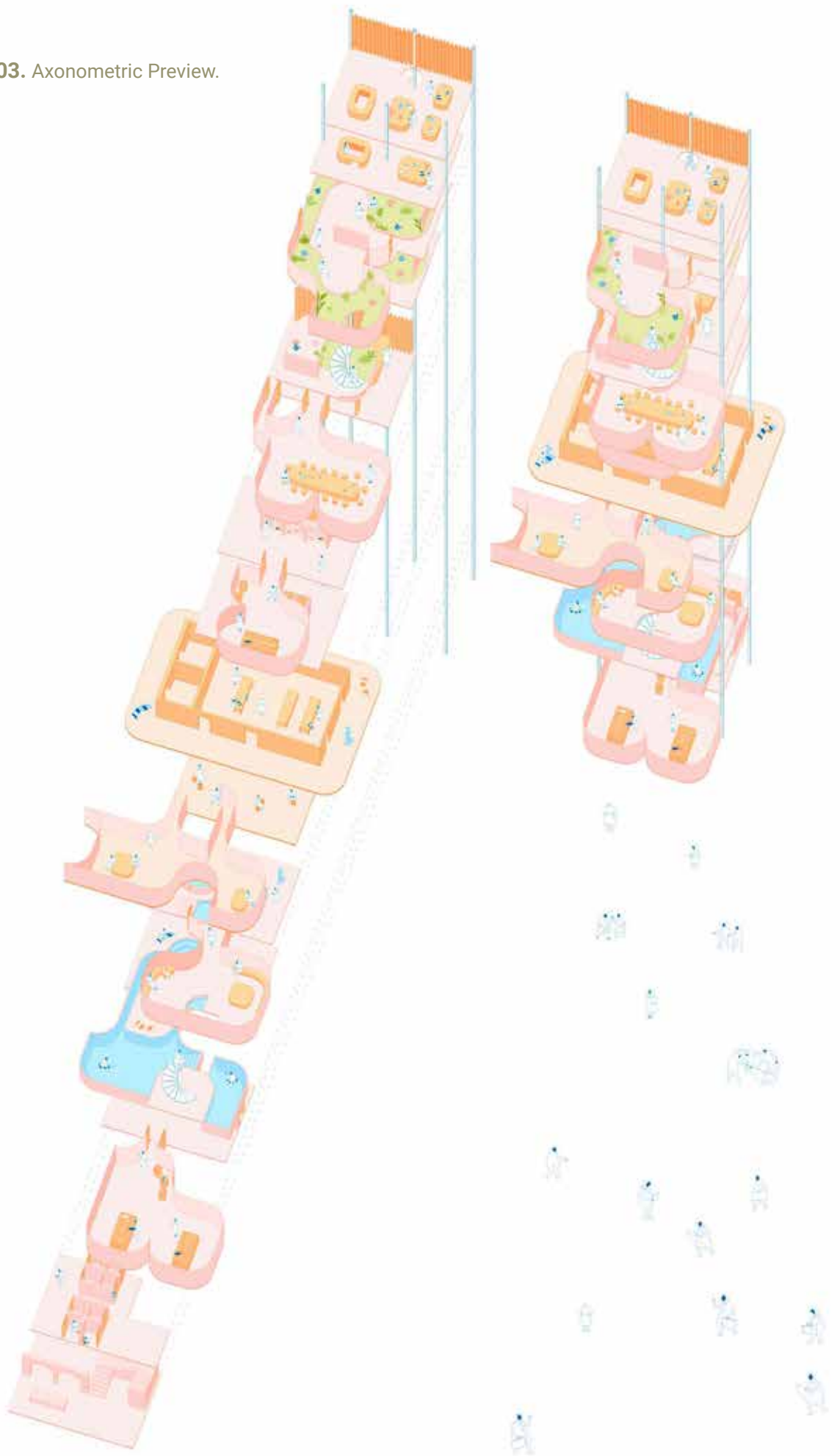


Figure 02. Characteristic Plans.

Figure 03. Axonometric Preview.



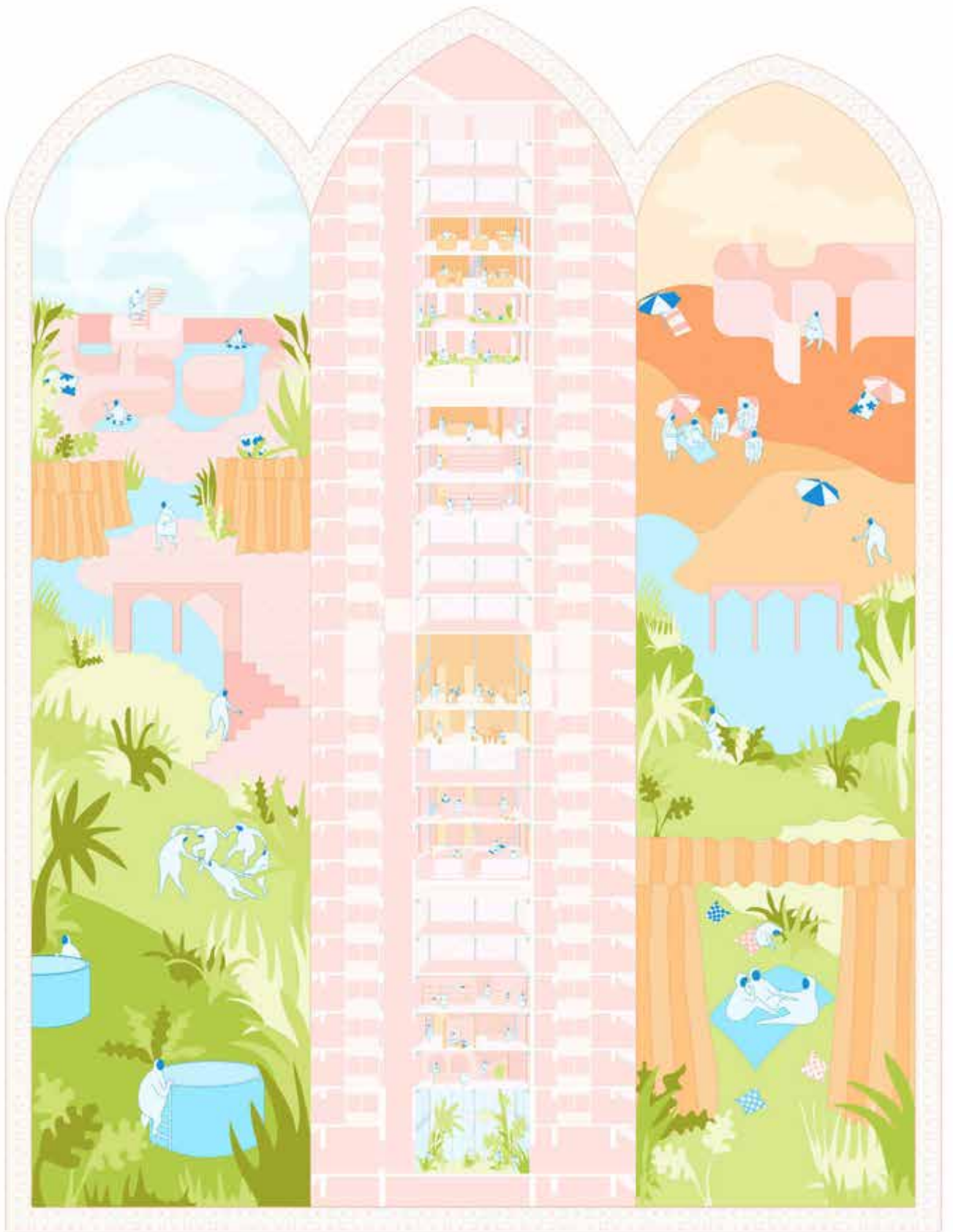


Figure 04. Ambinet Sequences.

## DEMONSTRATION 03.

### NOTIONS

- Cultural and Collective Memory

### HERITAGE TYPES

- Modern Heritage
- Urban Heritage

### DESIGN APPROACHES

- Heritage Reprogramming
- Community Building and Representation

### DESIGN ACTIONS

- Adaptive Reuse
- Heritage Value Matrix

### TOOLS

- Mapping, Documenting, Cataloguing

### ≡ Student

Nenad Pavlović

### ≡ Project Title

GLOTZT NICHT SO ROMANTISCH!

### ≡ Project Description

If progress is the main weapon of the neoliberal market, then heritage is only a perverse form of its negation. With the change of the socio-economic milieu, the heritage becomes intensively subject to the norms of globalization. Crucified between embalming and constant resuscitation, any acceptance of the expected becomes a form of capitulation, just as any reconstruction necessarily becomes a form of plastic surgery. The main argument of heritage is the preservation of value. The value of a thing, according to Marx, is necessarily defined by its use. Therefore, objects deprived of function cannot be given values. Social value, on the other hand, is considered in relation to the period in which the buildings had use value. "Trains exist only when they slip from the bottom, the more people die, the more trains there are. Planes only exist when they are hijacked. The only destiny of a car is to crash." We see value only through negation. Heritage has lost the race against time, because prefabricated nostalgia does not recognize time. The question we ask should not be what to keep but what to give up? This implies a new view of the cyclicity of heritage, viewing deterioration as an integral part of the life of the object. Taking into account the time, the prepared choreography turns the object into a myth, forming a narrative that will outlive it.

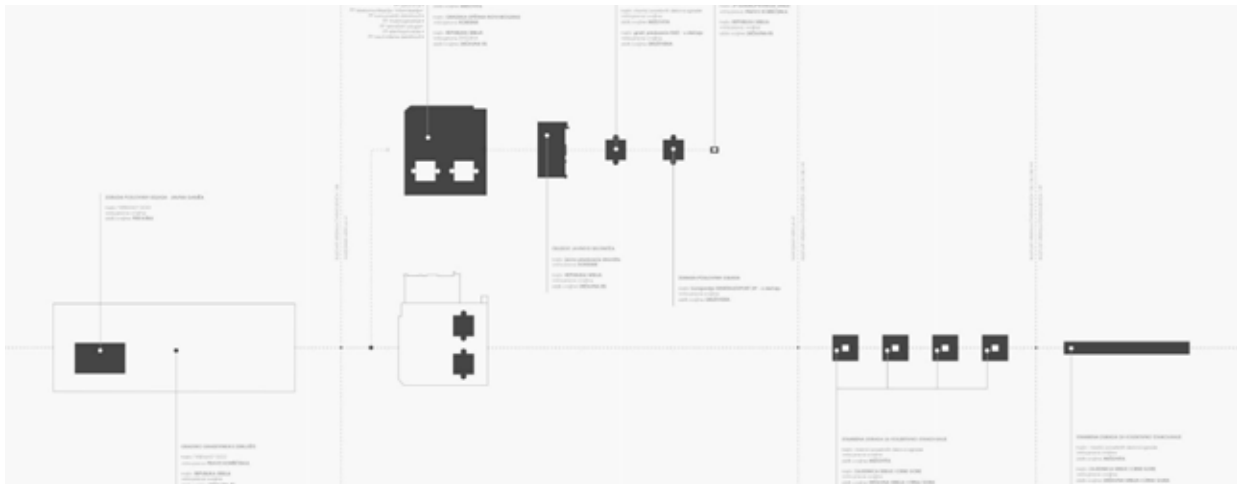
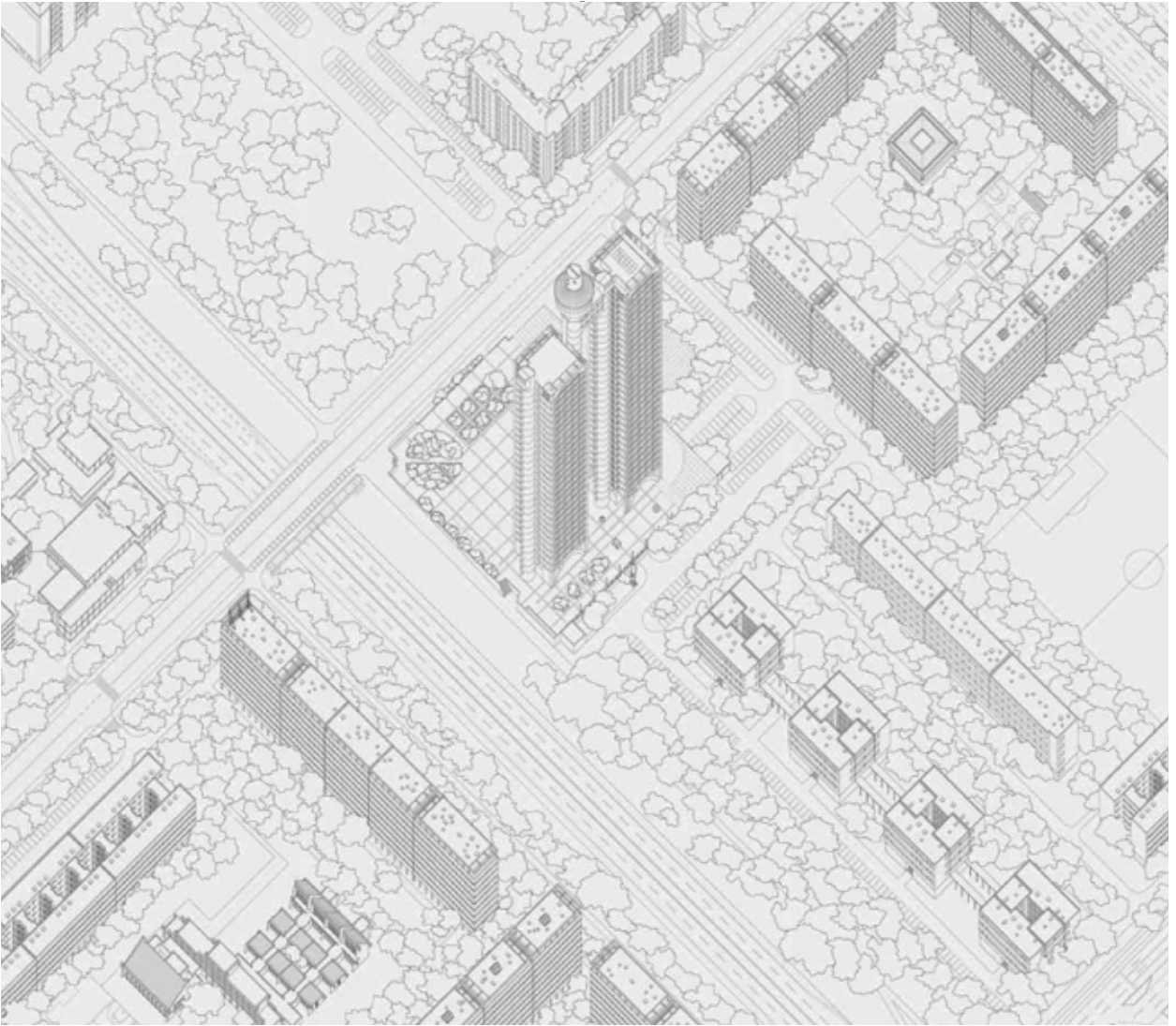
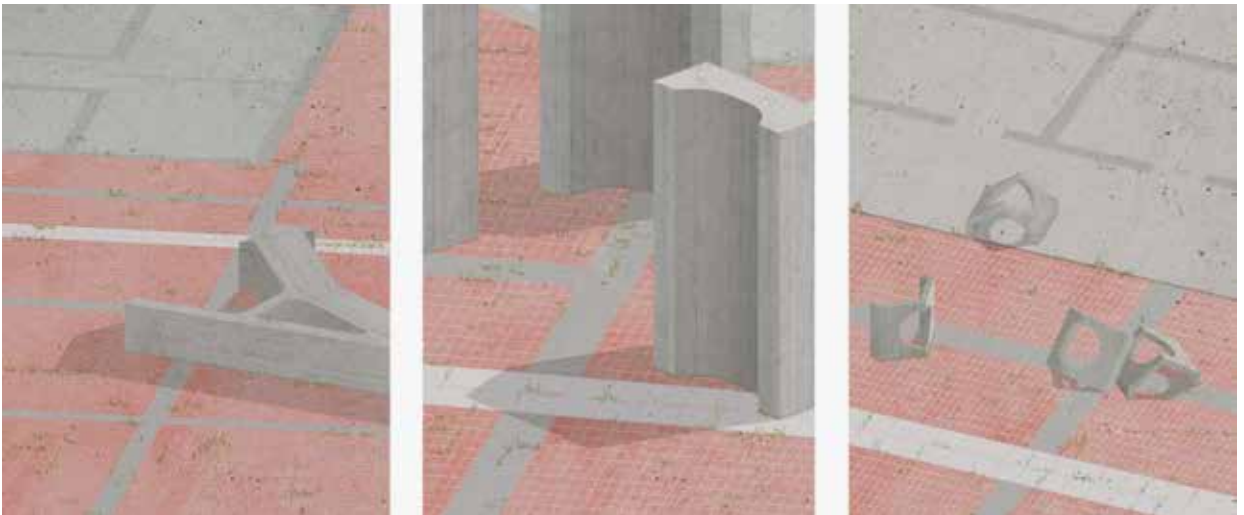


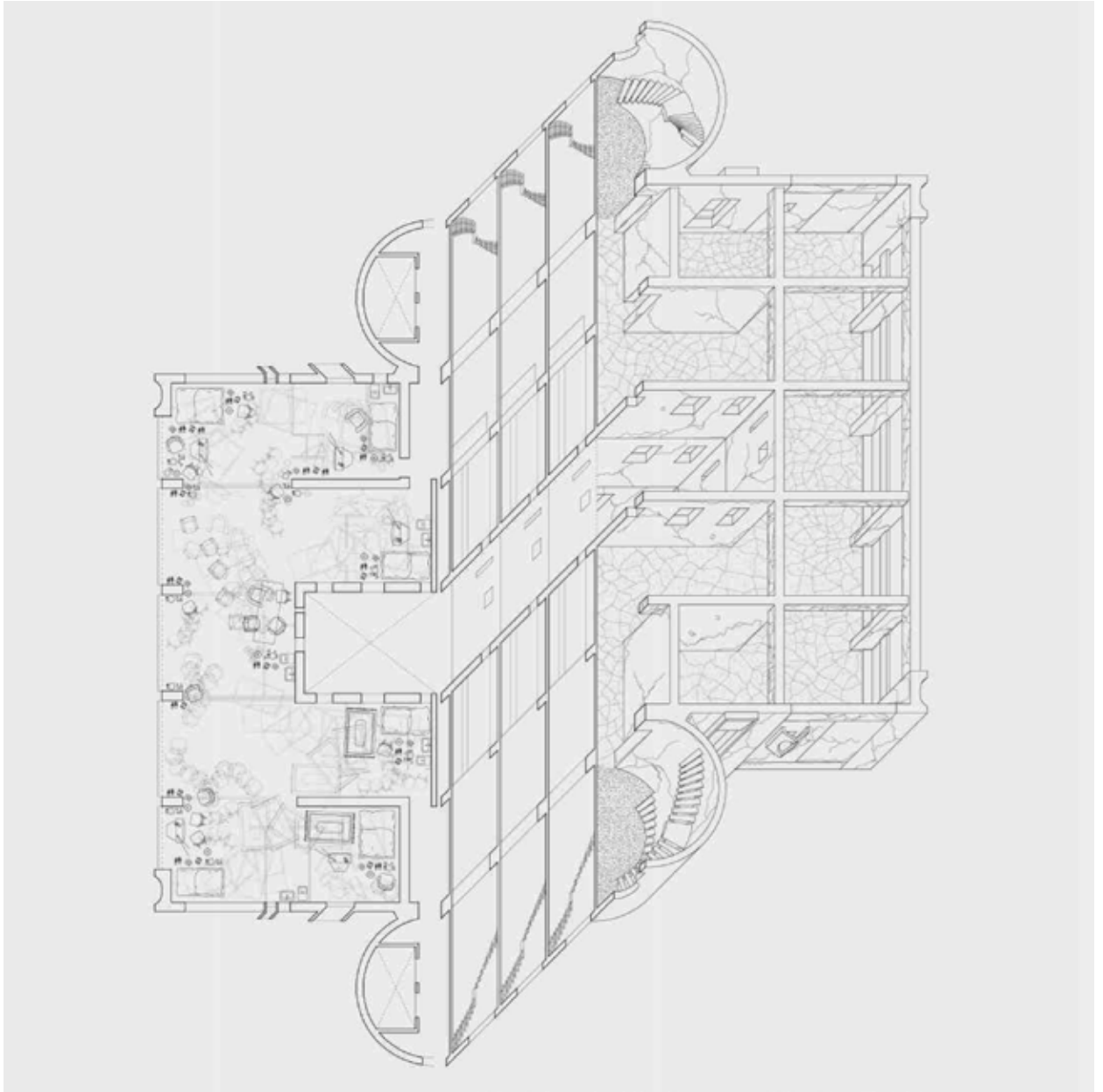
Figure 01. Conceptual Sketches.



**Figure 02.** Site Scope - Axonometric Preview.

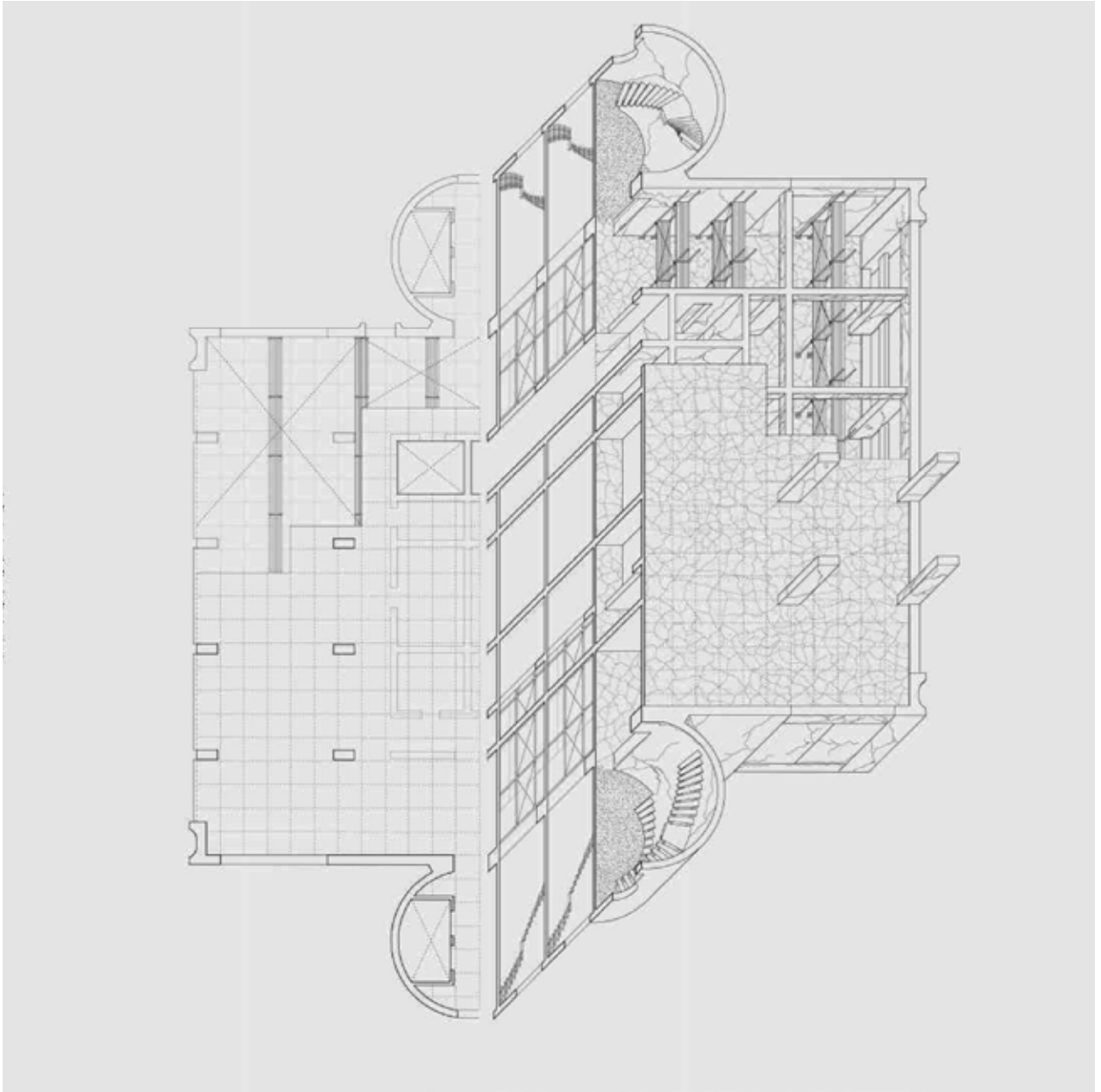


**Figure 03.** Detailing through Narratives.



**Figure 04.a** Drawing of Genex Reprogramming.

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**Figure 04.b** Drawing of Genex Reprogramming.

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## DEMONSTRATION 04.

### NOTIONS

- Cultural and Collective Memory

### HERITAGE TYPES

- Modern Heritage
- Urban Heritage

### DESIGN APPROACHES

- Heritage Reprogramming
- Community Building and Representation

### DESIGN ACTIONS

- Adaptive Reuse
- Heritage Value Matrix

### TOOLS

- Mapping, Documenting, Cataloguing

### ≡ Student

Andrej Jovanović

### ≡ Project Title

ARCHEOLOGY OF MEMORY

### ≡ Project Description

The city is an artist. By enabling incessant encounters he creates life, incessant interaction, touches, smells, sounds. The art of the city shapes our image of it. The city becomes a person, and the passer-by becomes its main and only character. The city personality lives as long as the imaginative constructions and sequences that give it identity and foundation in our personal mental map live. Without them, the city loses its being and becomes an unmotivated artifact, although it continues to physically exist and grow. The archeology of memory opens questions of the closeness of the city and passers-by, points to their common experiences, touches and traces, noting the time that creates and changes them. It acts in the sphere of the mental, the abstract, evokes some long-forgotten scenes and customs and places them in a specific spatial context. A new driver in space, it represents the basis for preserving the personality of the city and the continuity of the city being.

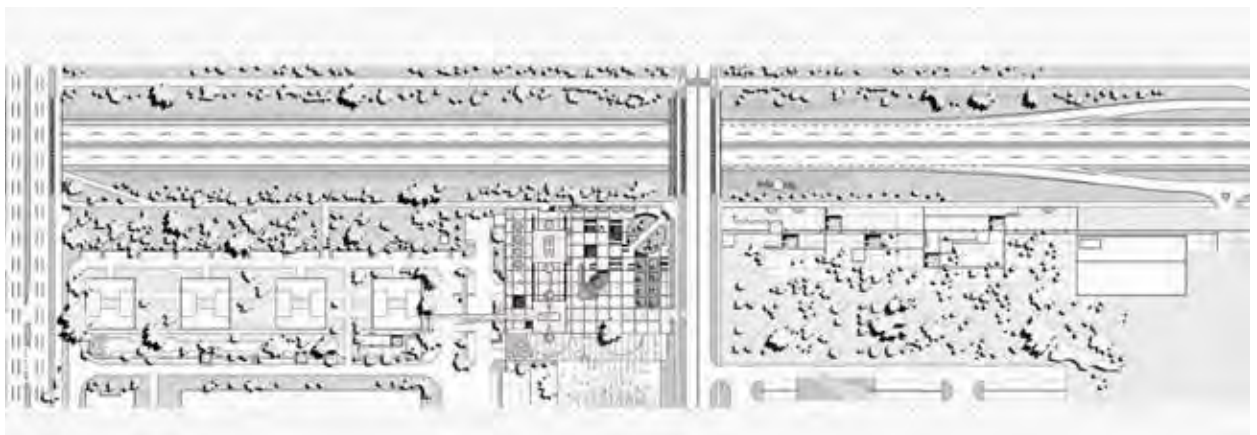
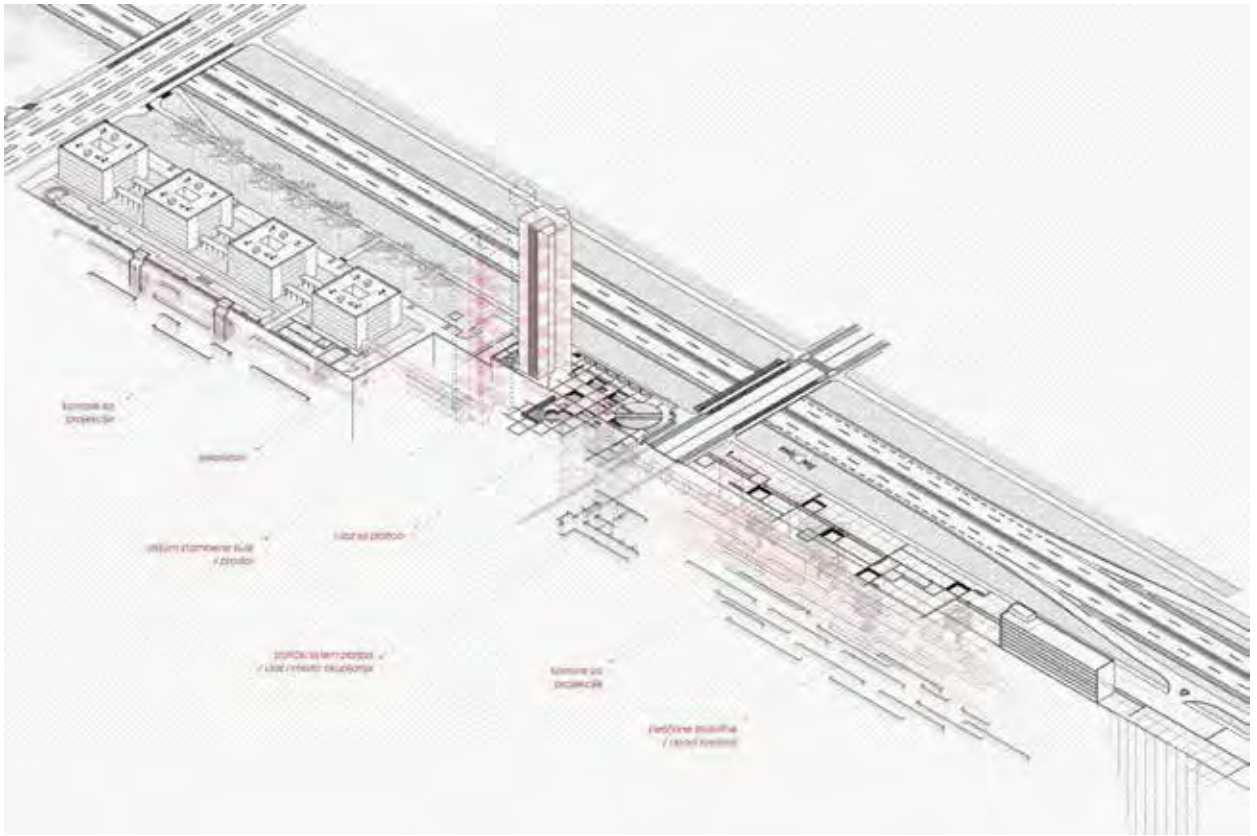
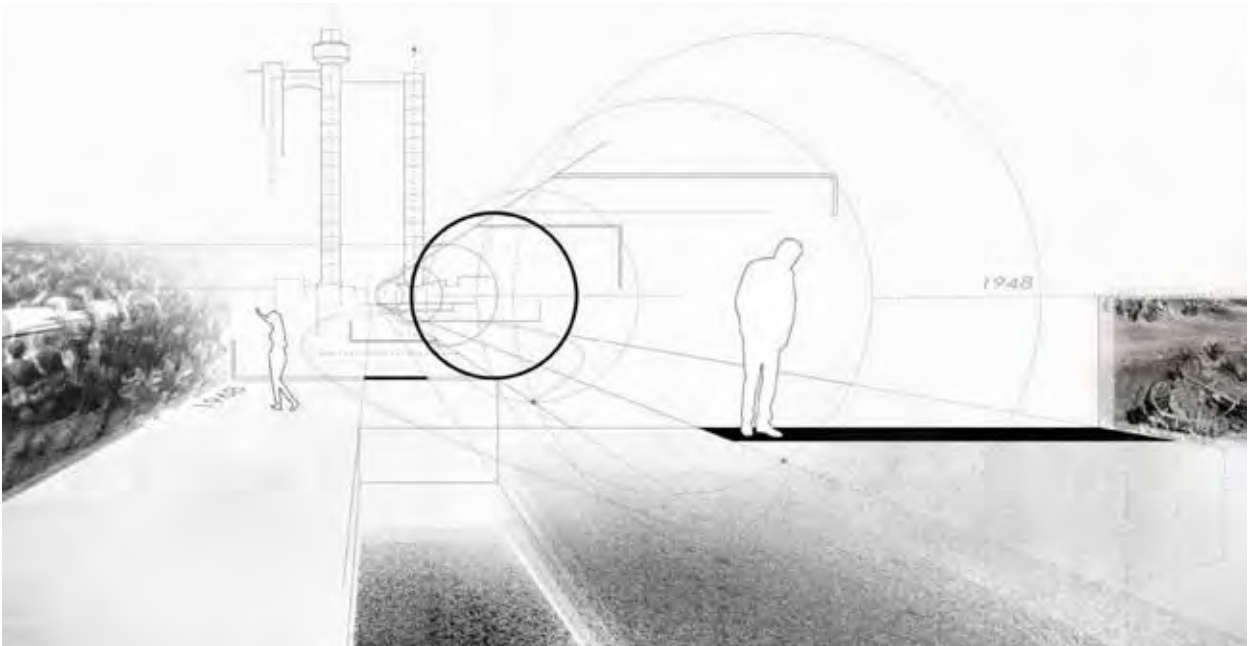


Figure 01. Site Plan.



**Figure 02.** Axonometric View.



**Figure 03.** Sequence of Memory.



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Professor:  
Ana Nikezić

Teaching Assistant:  
Aleksandra Milovanović

D05

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# FINAL MASTER STUDIO - A (THESIS + PROJECT) HYBRID NATURES IN THE CITY

## COURSE ID CARD

semester	10/4
ECTS	15+2
status	compulsory

### COURSE POSITION

#### Study program

Integrated single-cycle-5-year studies in architecture; Master of Architecture - Modul Architecture

#### Level

postgraduate level

#### Academic Year

2021-2022

### COURSE TYPES

Lecture

- ▶ Design Studio
- Theoretical Project
- Practical Work
- Seminar
- Workshop
- Summer School
- ▶ Thesis

### ☰ Course Description

The contemporary challenges of climate change, urban population growth, scarcity of resources and environmental crisis, as well as declining environmental quality encourage architecture to create new relationships between nature and culture. In the digital society of the anthropocene, the hybrid relations between the flows of nature and culture are examined, in which architecture becomes a new complex ECOSystem - a cyborg between nature and culture. Emphasizing the coevolutionary processes between human action and ecological systems, architecture strives to create multifunctional urbanities that do not only work in the present, but learn from experiences to adapt and become smarter.

## DEMONSTRATION.

### NOTIONS

- Cultural identity

### HERITAGE TYPES

- Urban Heritage
- Cultural Landscape

### DESIGN ACTIONS

- Heritage Reprogramming
- Developing Cultural Routes and Itineraries

### TOOLS

- Mapping, Documenting, Cataloguing
- Heritage Value Matrix

### ≡ Student

Dunja Dedić

### ≡ Project Title

DOMESTICATING THE DERELICT LANDSCAPE

### ≡ Project Description

Terrains vagues have overrun the oldest city neighbourhood of Novi Sad – Almaš, a rural enclave within a developing productive city. Having come into being either seamlessly or through violent occupation, these territories prohibit any further exploitation of the land. The wild landscape of tall grass, bushy trees, and spacious ponds, intercepts the house-packed streets. Any appropriation of terrains vagues must be a collective endeavour, and its outcome – the transition of the occupied territories into common good. The project is a guide, a grammar for the occupation of different urban landscapes. It builds on a thesis exploring the genesis of the productive city, and the correlating shift of Novi Sad from a modernist playscape to a for-profit city. An intricate programmatic manifest is inserted into the landscape, concocted out of historic forms of leisure, and the physical traces of an obscured public life. Four forms of leisure set themselves against four distinct landscapes.

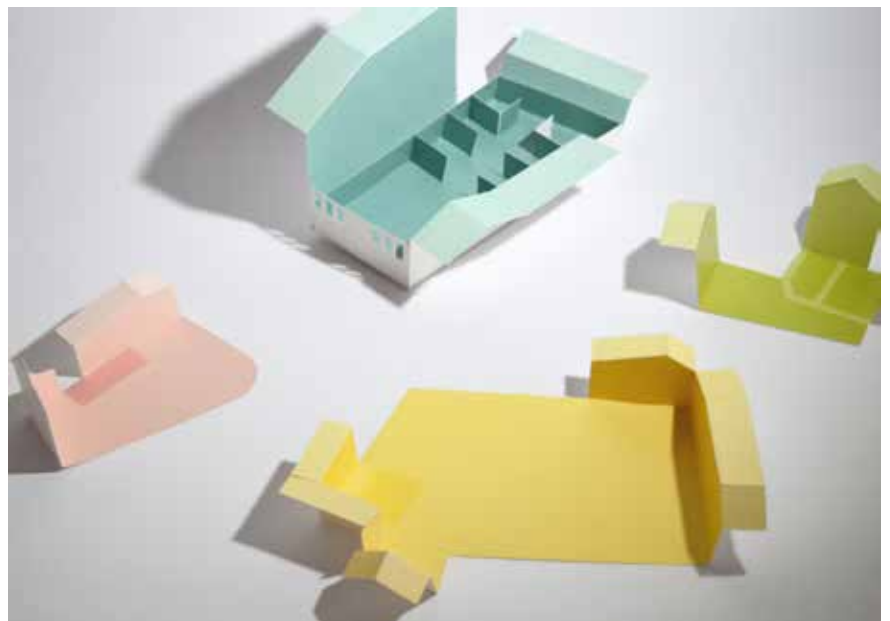


Figure 01. Conceptual Models.





Figure 02. Mapping Urban Heritage.





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Professor:  
Emanuela Sorbo

Teaching Assistants:  
Gianluca Spironelli, Sofia Tonello,  
Marco Tosato

D06  
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book of courses

# THEORY AND TECHNIQUES OF ARCHITECTURAL RESTORATION

## COURSE ID CARD

semester	2
ECTS	6
status	compulsory

### COURSE POSITION

#### Study program

Corso di laurea  
Magistrale Architettura

#### Level

undergraduate

#### Academic Year

2020-2021

### COURSE TYPES

- ▶ Lecture
- ▶ Design Studio
- ▶ Theoretical Project
- ▶ Practical Work
- ▶ Seminar
- ▶ Workshop
- ▶ Summer School
- ▶ Other

### ☰ Course Description

The course consists of a theoretical section and a design exercise concerning the restoration of historical architecture.

The primary objective for the Course in Theory and Techniques of Architectural Restoration was to acquire a method to analyse and design for architectural heritage focusing the attention on various elements:

- the preservation studies, in a historical and critical perspective, from the end of XIX century until today, through cultural connections and case-studies;
- conservation strategies applied and thought in the normative, cultural and theoretical horizon;
- design proposals linked with cultural values and architectural qualities preserved through formal, technological, structural and functional solutions.

The course included lecture-format lessons, workshop-format review activities and seminars with invited lecturers and stakeholder from public administrations that help the students' involvement with local entities and community. During the course, particular attention was provided to the interpretation of the structural and historical layers of a specific case study selected by the teaching team in dialogue with the local bodies and preservation authorities. The design exercise consisted of analysis and methodologies for the evaluation of the state of conservation and design choices for existing architecture (San Michele Arcangelo Church in Brendola called "Incompiuta" (Unfinished), in a state of degradation and abandonment.



**Figure 01.**

Dissemination activities for the educational path and students results.

a. The presentation of the Course in Theory and Techniques of Architectural Restoration (by prof. Emanuela Sorbo) was the starting point of educational experimentation on the case study "The unfinished Church of Brendola" in collaboration with the Municipality of Brendola and Soprintendenza archeologia, belle arti e paesaggio per le province di Verona Rovigo e Vicenza. The themes of urban ruin and abandonment focused on students' interpretation of the case study and the dialogue with the local agents as an occasion to interpret the site as a community asset to enhance public engagement.



b. The seminar "Il limite della Rovina" took place within the research project "Strategie di conservazione e valorizzazione della Chiesa della Incompiuta di Brendola". During the seminar, local agents, academics, researchers, and students met the community at the San Michele Arcangelo Church in Brendola. The meeting was an opportunity to present the outcome of the research and collaboration activities between local authorities, conservation entities, and universities, both in terms of research and educational activities.



c. "The exhibition "Lapis Memoriae. Scenari creativi per un non fini o architettonico" was organized on July 30th, 2022, in the square in front of San Michele Arcangelo Church in Brendola. The students of the Master's Course in Theory and Techniques of Architectural Restoration (by prof. Emanuela Sorbo) were involved in the exhibition and set-up activities. They presented their analyses of the building's characteristics and design strategies to the community throughout the day.

### NOTIONS

- Cultural Heritage
- Cultural & Collective Memory
- Cultural Identity
- Cultural Enhancement

### HERITAGE TYPES

- Modern Heritage
- Monumental Heritage
- Tangible and Intangible Heritage

### DESIGN APPROACHES

- Passive / Active Sustainable Design
- Community Building and Representation
- Multiscale Design Approach

### DESIGN ACTIONS

- Conservation
- Consolidation

### TOOLS

- Conservation Status Evaluation
- Photogrammetry
- Mapping, Documenting and Cataloguing

### ≡ Student Group

De Grandis Erika, Nuzzarello Miriam,  
Olivieri Valentina, Pistore Lorenzo

### ≡ Project Title

*IN-COMPIUTA.*

Tangible and intangible layers: storytelling and conservation.

### ≡ Project Description

The unfinished church in Brendola has in recent decades lies in its uniqueness, and the historical and community value of which the church is a symbol. The unfinished building itself is the result of a long process triggered by a fragile historical and social context, in a frame in which great events became decisive factors, such as the Great War and the death of the creator and supporter of the ambitious project, Don Francesco Cecchin. These events determined the inconstant rhythm of the construction phases, indirectly contributing to the building's destiny: its abandonment. In a succession of different techniques and materials, the project does not lose its stateliness, fitting monumentally in the landscape with its characteristic plasticity and compositional rigidity. The restoration project chooses to narrate what it wants to remember from the past and to which it wants to give a future identity, which is why the proposed interventions can be classified in two macro categories, which in turn follow a twofold line of intervention. The interventions on the building aim to consolidate the existing structure. The project wants to convey: unfinishedness, which is to be respected, and accessibility, which is to be guaranteed to as many people as possible. In the ultimate vision of the whole, the Incompiuta is a meeting place for the Brendolese community and passers-by,



# SOLUZIONI E VISIONI PROGETTUALI

LABORATORIO DI RICERCA E STUDI CONCETTUALI IN COLLABORAZIONE CON IL PROGETTO A.A. 2020-2021 E TORNARE TORINO DEL RESTAURO

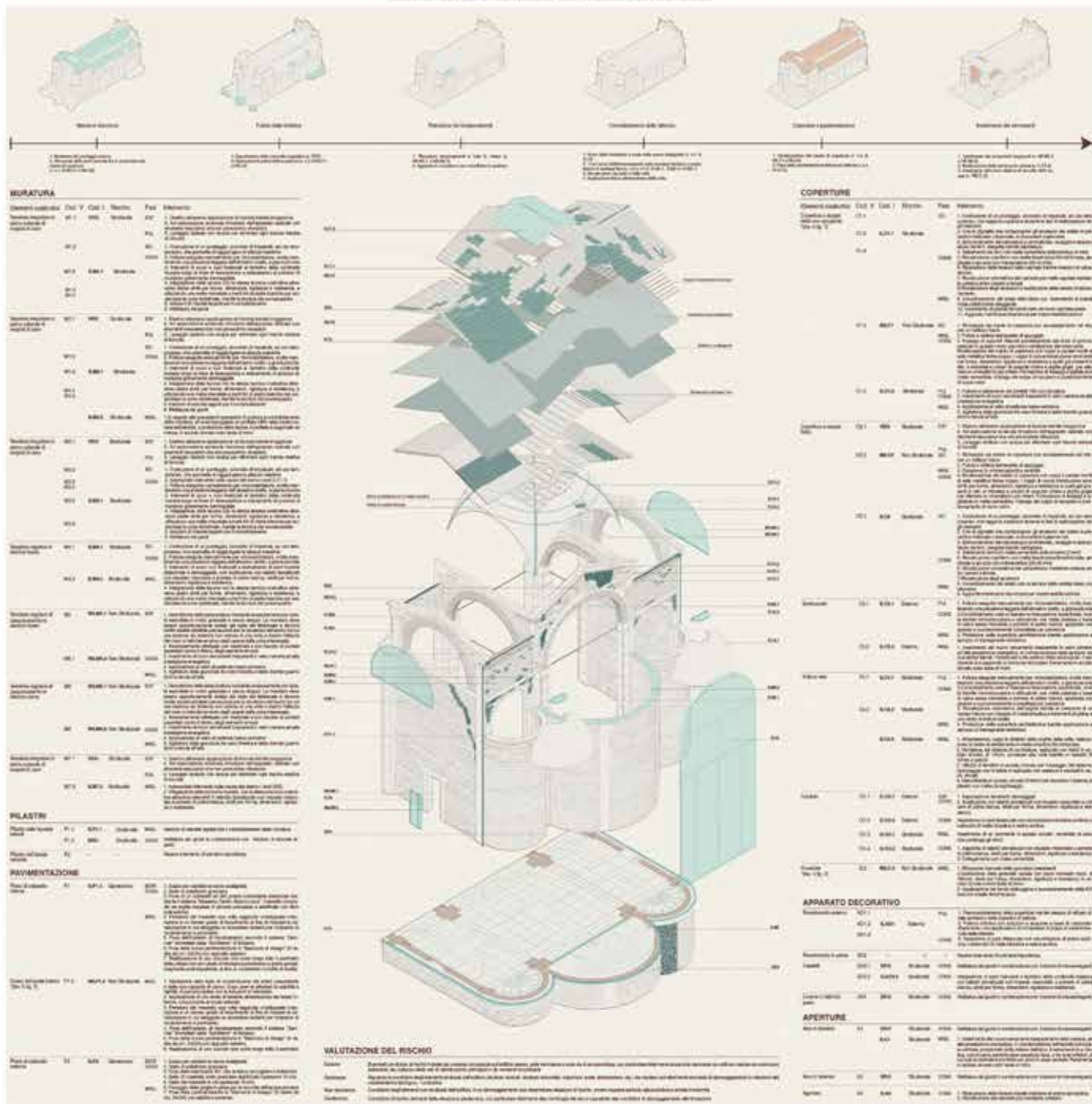


Figure 02.2.

Group 7. Example boards of the three step educational activities: Historical Technical Architectural Evaluation, Technical Conservative Architectural Evaluation and Conservation Design Process. Part 2.

# VALUTAZIONE DELLO STATO CONSERVATIVO

MEMORIA ALLE VIGINE - QUANTITATIVI DI QUANTITÀ AL PROGETTO I.T.A. 2000 0071 TOME I - MEMORIA AL MEMBR

### MISURE

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### COFERTURE

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C37	...	...	...
C38	...	...	...
C39	...	...	...
C40	...	...	...
C41	...	...	...
C42	...	...	...
C43	...	...	...
C44	...	...	...
C45	...	...	...
C46	...	...	...
C47	...	...	...
C48	...	...	...
C49	...	...	...
C50	...	...	...

### APPARATO DECORATIVO

Codice	Descrizione	Unità	Quantità
D1	...	...	...
D2	...	...	...
D3	...	...	...
D4	...	...	...
D5	...	...	...
D6	...	...	...
D7	...	...	...
D8	...	...	...
D9	...	...	...
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D33	...	...	...
D34	...	...	...
D35	...	...	...
D36	...	...	...
D37	...	...	...
D38	...	...	...
D39	...	...	...
D40	...	...	...

### APERTURE

Codice	Descrizione	Unità	Quantità
A1	...	...	...
A2	...	...	...
A3	...	...	...
A4	...	...	...
A5	...	...	...
A6	...	...	...
A7	...	...	...
A8	...	...	...
A9	...	...	...
A10	...	...	...
A11	...	...	...
A12	...	...	...
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A25	...	...	...
A26	...	...	...
A27	...	...	...
A28	...	...	...
A29	...	...	...
A30	...	...	...

### PAVIMENTAZIONE

Codice	Descrizione	Unità	Quantità
P1	...	...	...
P2	...	...	...
P3	...	...	...
P4	...	...	...
P5	...	...	...
P6	...	...	...
P7	...	...	...
P8	...	...	...
P9	...	...	...
P10	...	...	...
P11	...	...	...
P12	...	...	...
P13	...	...	...
P14	...	...	...
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P23	...	...	...
P24	...	...	...
P25	...	...	...
P26	...	...	...
P27	...	...	...
P28	...	...	...
P29	...	...	...
P30	...	...	...

### CLASSIFICAZIONE DEI DANNI

Codice	Descrizione	Unità	Quantità
D1	...	...	...
D2	...	...	...
D3	...	...	...
D4	...	...	...
D5	...	...	...
D6	...	...	...
D7	...	...	...
D8	...	...	...
D9	...	...	...
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D24	...	...	...
D25	...	...	...
D26	...	...	...
D27	...	...	...
D28	...	...	...
D29	...	...	...
D30	...	...	...

Figure 02.3.

Group 7. Example boards of the three step educational activities: Historical Technical Architectural Evaluation, Technical Conservative Architectural Evaluation and Conservation Design Process. Part 3.

## SOLUZIONI E VISIONI PROGETTUALI

LAVORO COLLETTIVO VINCITORE DEL CONCORSO DI CULTELE DI PROGETTO A.A. 2009/2010 - TEMATICA: TRONCHI DI MESSINA



Figure 02.4.

Group 7. Example boards of the three step educational activities: Historical Technical Architectural Evaluation, Technical Conservative Architectural Evaluation and Conservation Design Process. Part 4.

## DEMONSTRATION 02.

### NOTIONS

- Cultural Heritage
- Cultural & Collective Memory
- Cultural Identity
- Cultural Enhancement

### HERITAGE TYPES

- Modern Heritage
- Monumental Heritage
- Tangible and Intangible Heritage

### DESIGN APPROACHES

- Passive / Active Sustainable Design
- Community Building and Representation
- Multiscale Design Approach

### DESIGN ACTIONS

- Conservation
- Consolidation

### TOOLS

- Conservation Status Evaluation
- Photogrammetry
- Mapping, Documenting and Cataloguing

### ≡ Student Group

Gasparini Alice, Quaglio Alessandra,  
Satalino Simone, Tiso Giovanna

### ≡ Project Title

*IN – COMPIUTA.*  
Unfinished in social memo y: a conservation project.

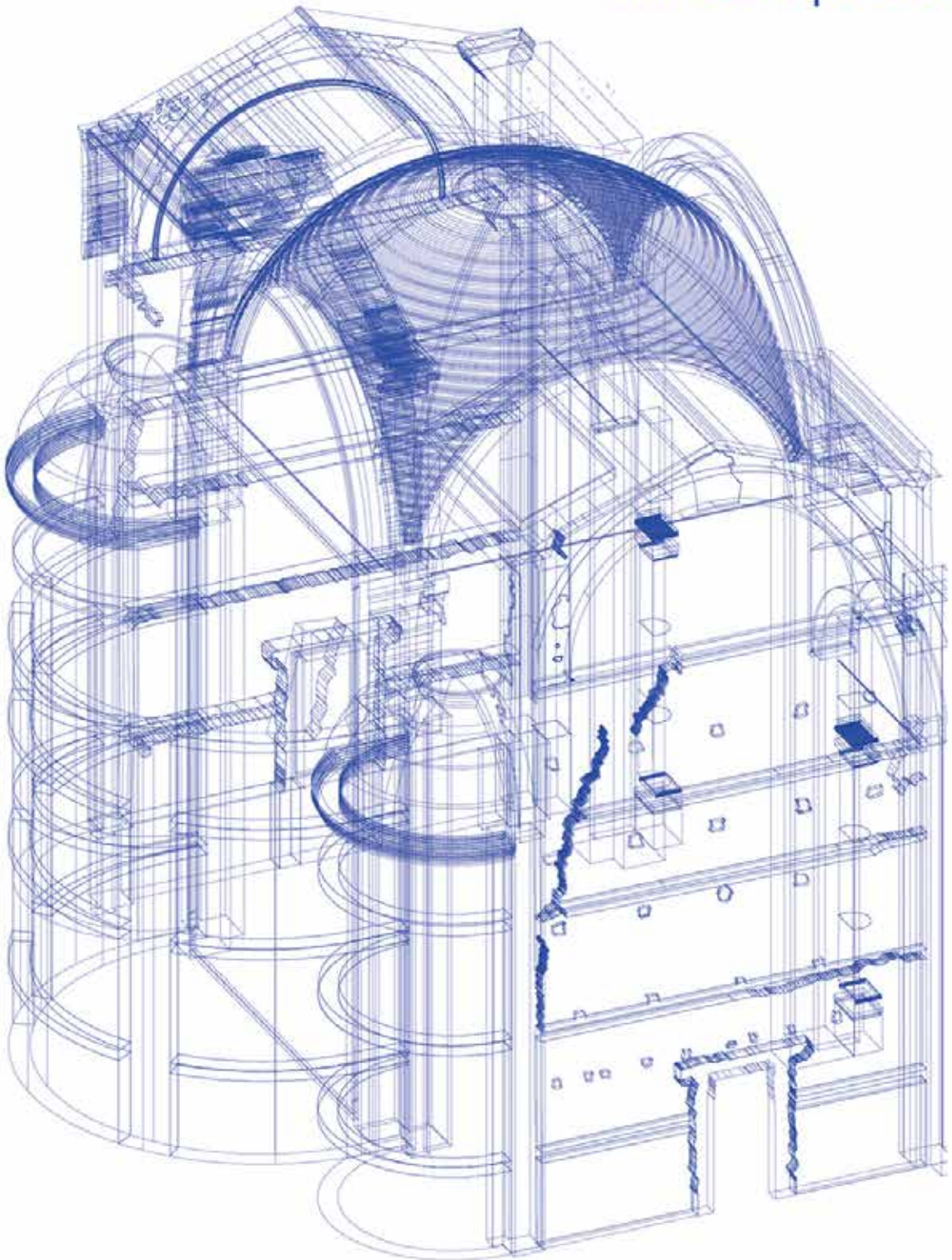
### ≡ Project Description

The San Michele Arcangelo Church in Brendola was built to symbolise a community. The efforts for its construction involved the entire diocese of Vicenza, accumulating funds, local materials and the modern know-how of the workers. The construction site, interrupted by the difficulties of the war, was never resumed, reaching us in a state of incompleteness and neglect. The passage of time has led to the worsening neglect and degradation of the structure, encouraging the growth of weeds, the collapse of portions of the roof, cracks in many parts of the masonry, and compromising the structure's static and stability. This latter reason aroused the municipality's interest, which, after the purchase, carried out consolidation work in 2012. The design strategy is part of the reawakening of the "Incompiuta" church, to preserve its image and form because of the evocative and spiritual importance it has for the Brendolan community. We focused on the church's transept and, in particular, hypothesised interventions to consolidate original parts and replace damaged elements. The environment, which was previously completely uncovered and subject to the details, is now a place that can host various functions, perpetuating the sense of belonging to this community.

### Figure 03.1.

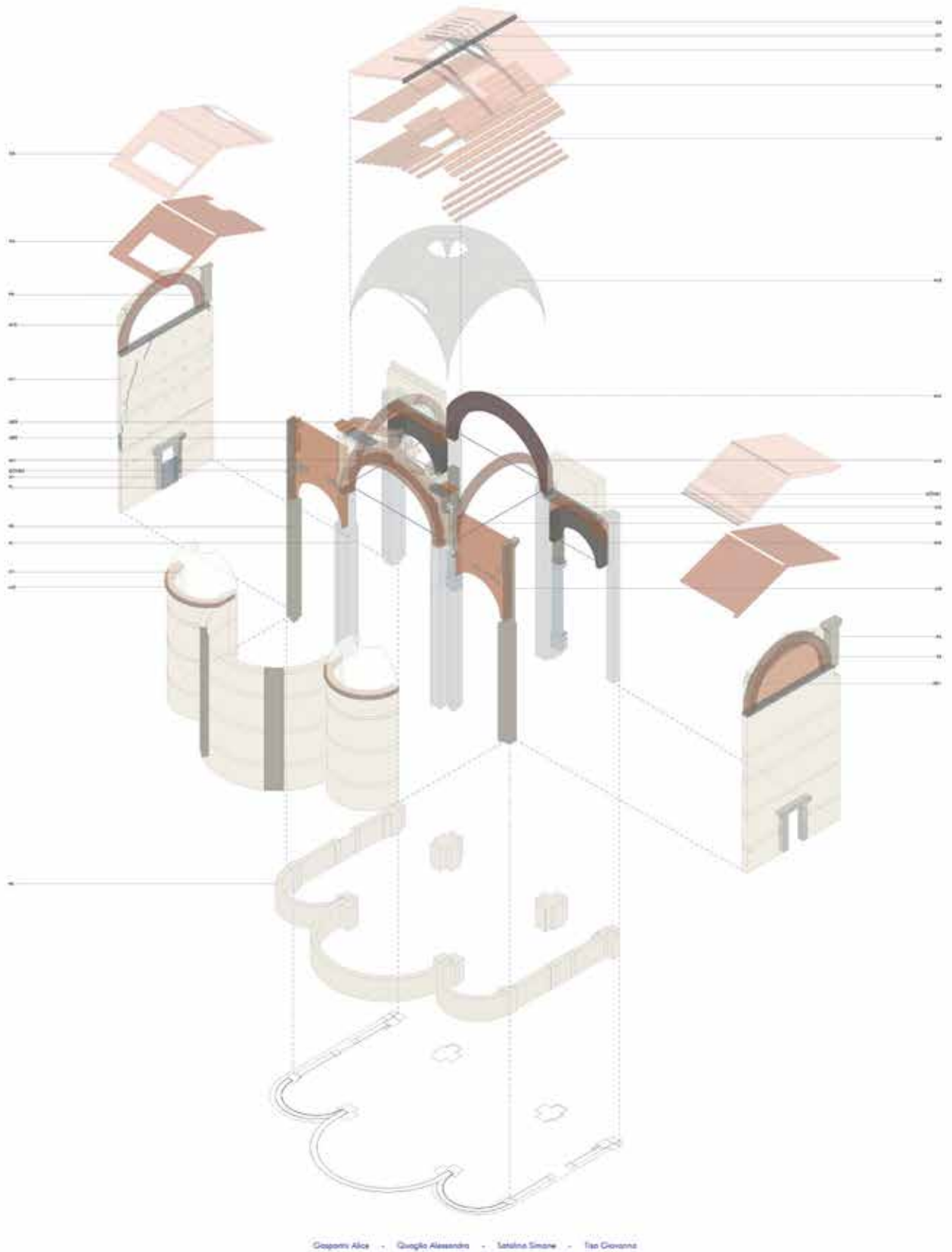
Group 9. Example boards of the three step educational activities: Historical Technical Architectural Evaluation, Technical Conservative Architectural Evaluation and Conservation Design Process. Part 1.

in-compiuta



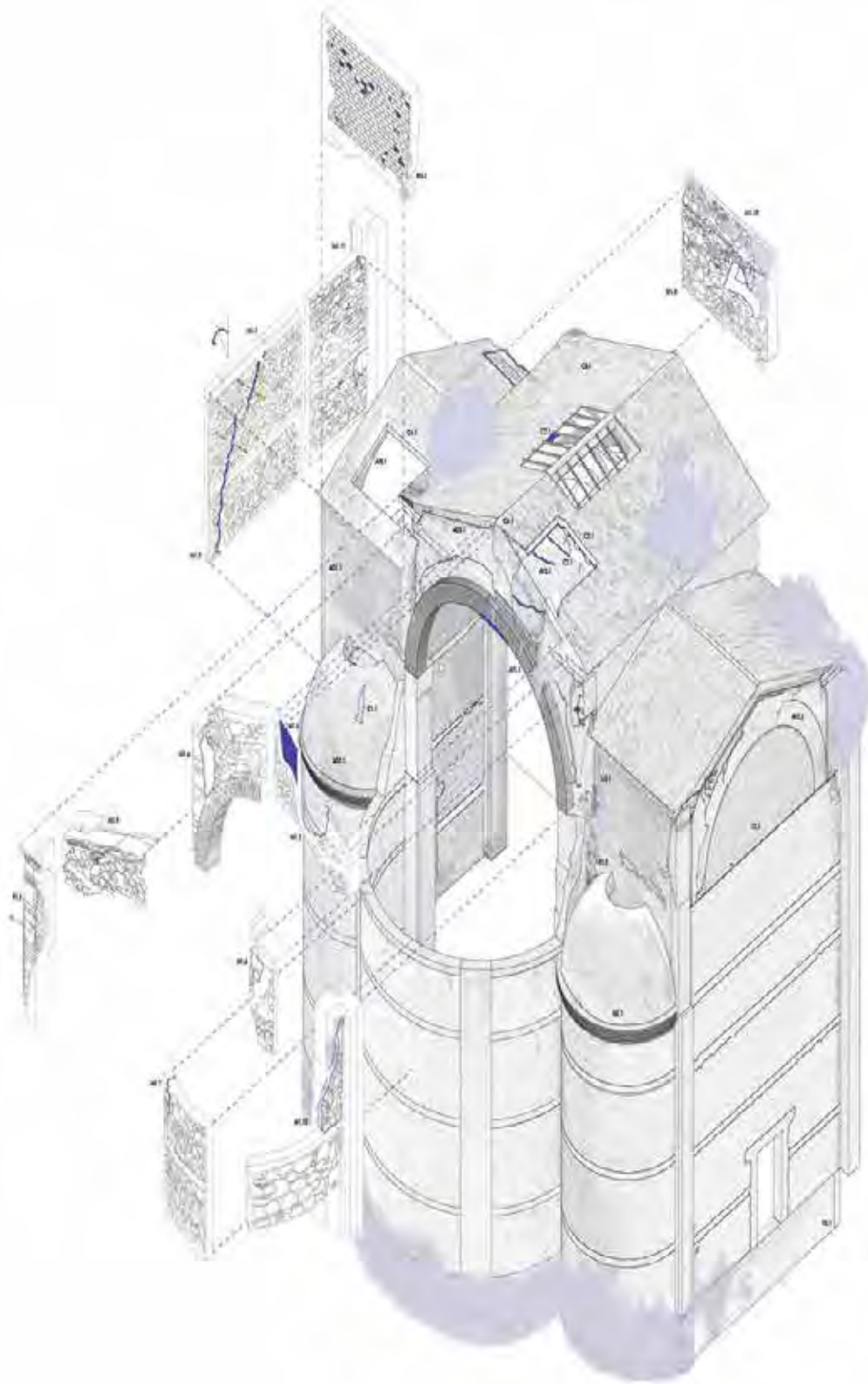
Gruppo M&A - Gruppo Alessandrini - Sabinini Sironi - T&G Giovinetti

tav. 1.1  
Sezione e pianta del Padiglione  
Prof. Leo Ermanno Sestini



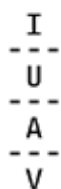
**Figure 03.2.**

3. Group 9. Example boards of the three step educational activities: Historical Technical Architectural Evaluation, Technical Conservative Architectural Evaluation and Conservation Design Process. Part 2.



**Figure 03.3.**

Group 9. Example boards of the three step educational activities: Historical Technical Architectural Evaluation, Technical Conservative Architectural Evaluation and Conservation Design Process. Part 3.



**Università Iuav  
di Venezia**

Iuav

✕

Professor:  
Mauro Marzo

Teaching Assistants:  
Viola Bertini, Susanna Campeotto,  
Mattia Coccozza, Celeste Da Boit,  
Giada Saviane, Robert Vicentini

D07

**demonstrations**  
book of courses

# DESIGN STUDIO

## TEACHING UNIT: URBAN PROJECT

### COURSE ID CARD

semester	5-6
ECTS	8
status	compulsory

#### COURSE POSITION

##### Study program

Bachelor degree in  
Architecture:  
Techniques and Design

##### Level

undergraduate

##### Academic Year

2021-2022

#### COURSE TYPES

Lecture

- Design Studio
- Theoretical Project
- Practical Work
- Seminar
- Workshop
- Summer School
- Other

#### ☰ Course Description

The course aims at leading students to address architecture design in relation to the issue of site identity. In particular, through lessons and exercises, an analytical/design approach is defined in order to answer to the complexity of tourism in relation to the character of places and to the life of their inhabitants, the specificity of landscapes and buildings, the delicate balance between protection and enhancement of pre-existences, and the ways of crossing urban and nearby territories.

The project task consists in the design of a Museum-Archive dedicated to the work of the Italian cartoonist Carlo Tullio-Altan, located in the city of Aquileia, declared a UNESCO World Heritage site in 1998.

## DEMONSTRATION 01.

### NOTIONS

- Cultural Heritage
- Cultural Enhancement

### HERITAGE TYPES

- Tangible and Intangible Heritage
- Heritage sites
- Natural heritage

### DESIGN APPROACHES

- Community Building and Representation

### DESIGN ACTIONS

- Redevelopment
- Adaptive Reuse

### TOOLS

- Space syntax
- Morphogenesis Studies

### Student Group

Riccardo Brazzale, Michele Casertano, Luca Pistorello

### Project Title

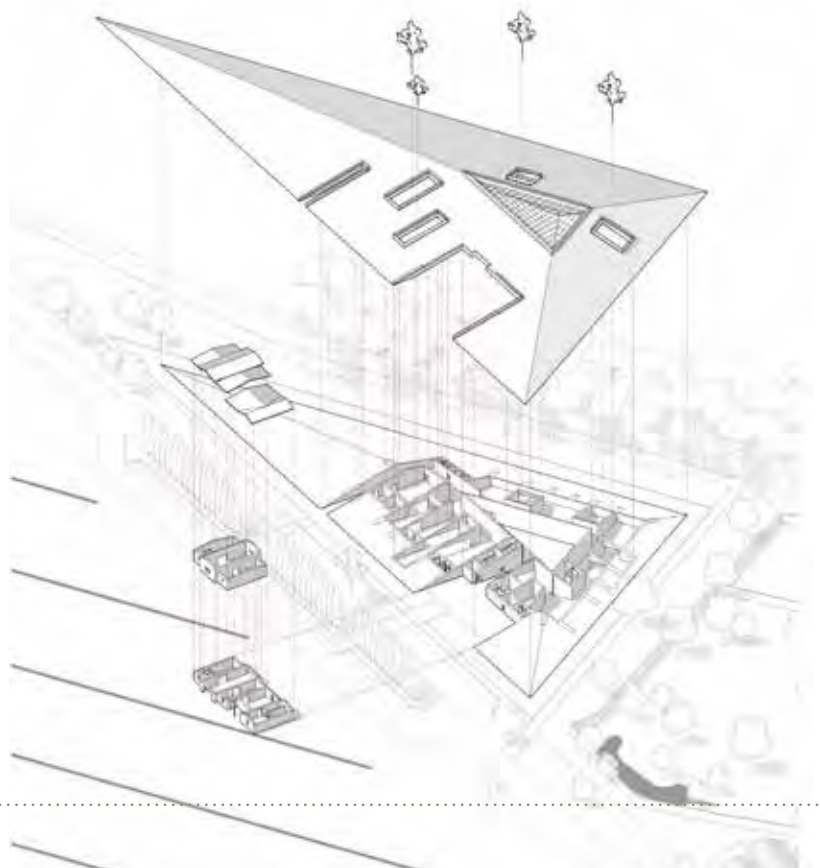
*Grid digging: a proposal for a Museum-Archive in Aquileia*

### Project Description

The project is located in the hamlet of Belvedere, near a railway station fallen into disuse. The area, characterised by the presence of two typical examples of pine forest, is bordered by the Alpe Adria cycle path, connecting the site with the historical city centre of Aquileia to the north, and with the Grado Lagoon to the south. The building occupies the entire available area and results from a series of soil movement operations. The Museum-Archive, dedicated to Altan's work, is a sort of hidden space, located within a gentle artificial slope treated with greenery, which incorporates the abandoned station as a part of the new building. Thanks to these design choices, the building fits skilfully into the landscape, without altering its characteristics.

### Figure 01.

Università Iuav di Venezia,  
Third year design studio,  
teaching unit Urban project,  
academic year 2020/21.  
Teacher: Mauro Marzo,  
teaching assistants: Viola Bertini, Susanna Campeotto, Mattia Coccozza, Celeste Da Boit, Giada Saviane, Robert Vicentini. Design exercise for a Museum-Archive dedicated to the work of Carlo Tullio-Altan. Project title: *Grid digging: a proposal for a Museum-Archive in Aquileia*. Students: Riccardo Brazzale, Michele Casertano, Luca Pistorello. Axonometric representation and exterior views of the design proposal.





## DEMONSTRATION 02.

### NOTIONS

- Cultural Heritage
- Cultural Enhancement

### HERITAGE TYPES

- Tangible and Intangible Heritage
- Heritage sites
- Urban heritage
- Monumental heritage
- Archaeological sites

### DESIGN APPROACHES

- Community Building and Representation

### DESIGN ACTIONS

- Redevelopment

### TOOLS

- Space syntax
- Morphogenesis Studies

### Student Group

Chiara Bosello, Giacomo Dall'Antonia, Gabriele Serena

### Project Title

*Declinations of Altan: a proposal for a Museum-Archive in Aquileia*

### Project Description

The project is located in an area between the Patriarchal Basilica of Aquileia and the Alpe Adria cycle path, within the *core area* of the UNESCO site. The presence of the Basilica, one of the most significant historic buildings in the city, and the many archaeological remains close to the site address the design choices. The traces of the surrounding historical and archaeological context, in fact, give form to the building, which is partially underground and covered with greenery: the cruciform shape of the entrance paths to the Museum recalls that of the early Christian Basilica, an exit path from the building takes instead the direction of the ruins of the Roman walls, while the whole layout is generated from the archaeological remains of the *horrea*.

Figure 02.

Università Iuav di Venezia, Third year design studio, teaching unit Urban project, academic year 2020/21. Teacher: Mauro Marzo, teaching assistants: Viola Bertini, Susanna Campeotto, Mattia Coccozza, Celeste Da Boit, Giada Saviane, Robert Vicentini. Design exercise for a Museum-Archive dedicated to the work of Carlo Tullio-Altan. Project title: *Declinations of Altan: a proposal for a Museum-Archive in Aquileia*. Students: Chiara Bosello, Giacomo Dall'Antonia, Gabriele Serena. Aerial view, axonometric representation and exterior view of the design proposal.





## DEMONSTRATION 03.

### NOTIONS

- Cultural Heritage
- Cultural Enhancement

### HERITAGE TYPES

- Tangible and Intangible Heritage
- Heritage sites
- Urban heritage
- Monumental heritage
- Archaeological sites

### DESIGN APPROACHES

- Community Building and Representation

### DESIGN ACTIONS

- Redevelopment

### TOOLS

- Space syntax
- Morphogenesis Studies

### Student Group

Beniamin Giovanni Cassetta, Noemi Vianello

### Project Title

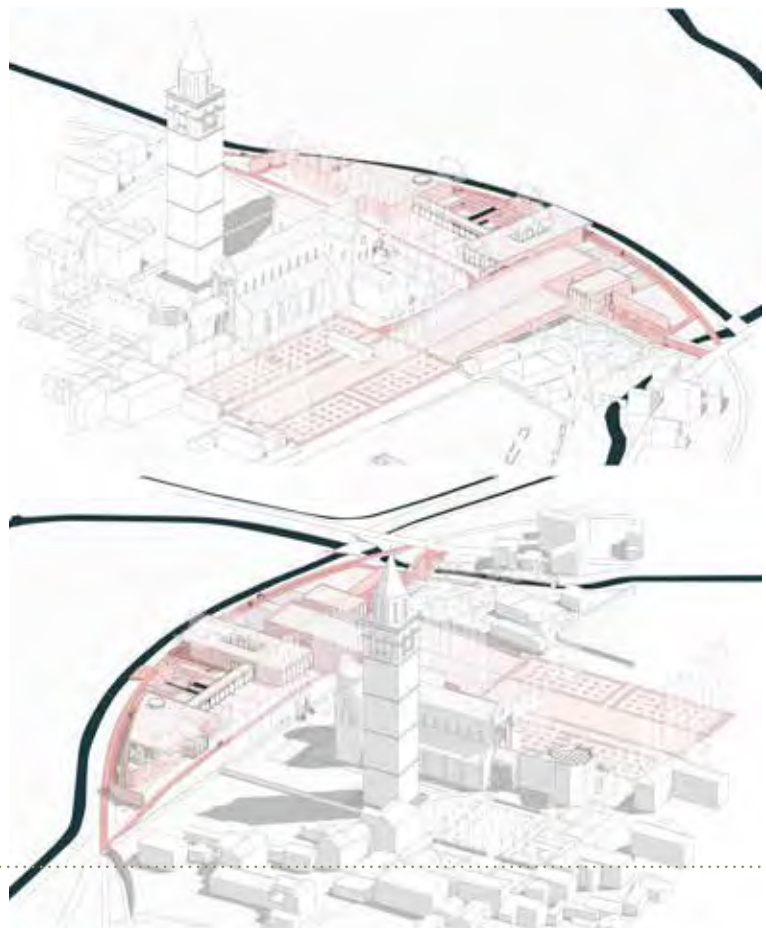
*Lost relationships*: a proposal for a Museum-Archive in Aquileia

### Project Description

The project is located in an area between the Patriarchal Basilica of Aquileia and the Alpe Adria cycle path, within the core area of the UNESCO site. The design reinterprets the place, the landscape, and the main elements of the context such as the Basilica, the archaeological remains, the Via Sacra and the rhythm of the fields in the countryside. These elements shape positions and orientations of the building. In order to integrate the Museum within the plain terrain, it is horizontally developed and presents a system of walls orienting the eye and framing views toward the landscape and the city. The themes of ruin and action of time are assumed to establish a relationship between the new and the historical pre-existences.

### Figure 03.

Università Iuav di Venezia,  
Third year design studio,  
teaching unit Urban project,  
academic year 2020/21.  
Teacher: Mauro Marzo,  
teaching assistants: Viola Bertini, Susanna Campeotto, Mattia Coccozza, Celeste Da Boit, Giada Saviane, Robert Vicentini. Design exercise for a Museum-Archive dedicated to the work of Carlo Tullio-Altan. Project title: *Lost relationships: a proposal for a Museum-Archive in Aquileia*. Students: Beniamin Giovanni Cassetta, Noemi Vianello. Axonometric representations and aerial view of the design proposal.







UCY

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Professor:  
Andreas L. Savides

D08  
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# ADVANCED TOPICS IN URBAN PLANNING

## COURSE ID CARD

semester	Fall
ECTS	8
status	optional

### COURSE POSITION

#### Study program

Integrated Master of  
Architecture

#### Level

postgraduate

#### Academic Year

2022-2023

### COURSE TYPES

Lecture

Design Studio

Theoretical Project

Practical Work

Seminar

► Workshop

Summer School

Other

### ☰ Course Description

The coursework consists of a workshop and a survey course based on best practices in sustainable urban design and redevelopment, with a particular focus on the challenges facing the Eastern Mediterranean region. The coursework includes thematic presentations, the analysis of cases studies, role playing and visioning exercises and a final master-planning exercise in a location to be specified by the instructor. A holistic approach of a multidisciplinary nature is followed based on weekly reviews and complementary lectures of related themes. A reader of related texts and precedents are provided and the students are evaluated based on course attendance, participation in thematic presentations and a final presentation and assignment submission.

# DEMONSTRATION.

## NOTIONS

- Cultural Heritage

## HERITAGE TYPES

- Landscape heritage
- Urban heritage

## DESIGN ACTIONS

- Revitalization
- Adaptive Reuse

### Student Group

Eleni Yianni, Rebecca Evangelou, Stelios Economides

### Project Title

Urban infill and adaptive reuse in the context of a listed settlement in Cyprus' mountainous region.

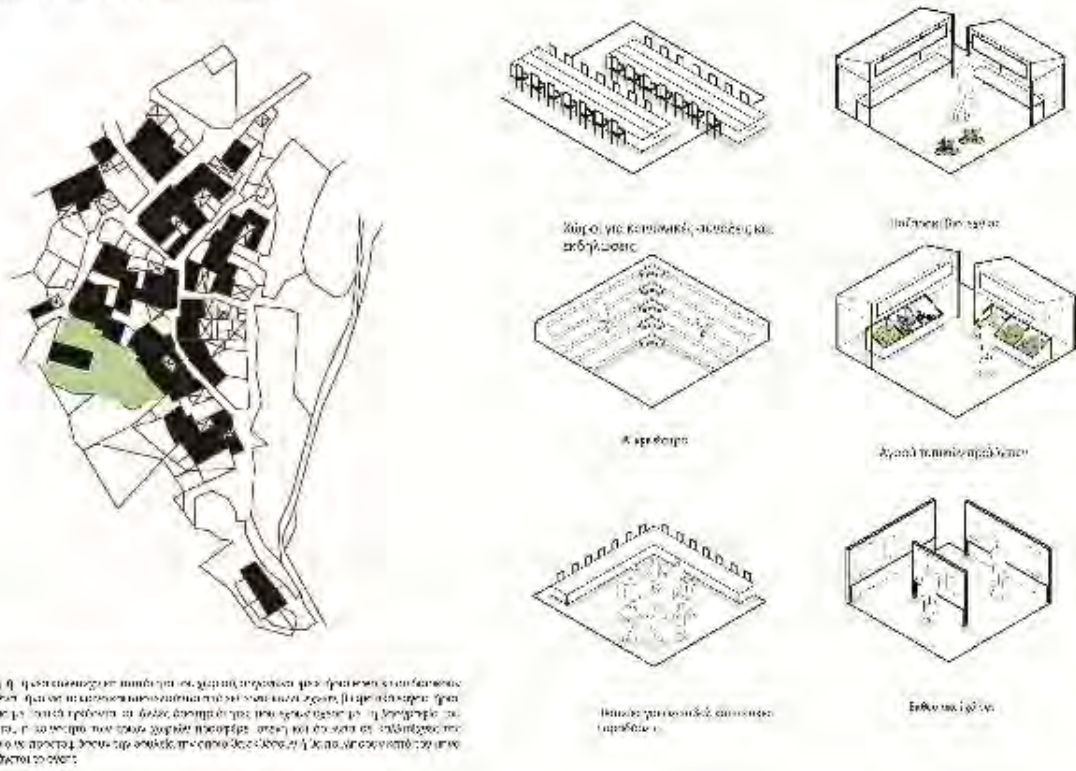
### Project Description

The Project deals with the regeneration of a mountainous village and the initiatives listed below are expected to jumpstart the local economy and provide a source of revenue to fund the works. The team suggests rebuilding the damaged structures and roads and revitalizing the historic vineyards and olive groves. They suggest using local raw materials in the reconstruction and traditional construction methods. Local artisans have expressed an interest to occupy refurbished structures and convert them to live-work lodgings, thus diversifying the economic sources of the village. Incentives are offered to attract required groups for a finite term of time until self sufficiency has been attained. The ultimate goal is to keep local built and natural fabric as well as local customs, traditions and culture alive.

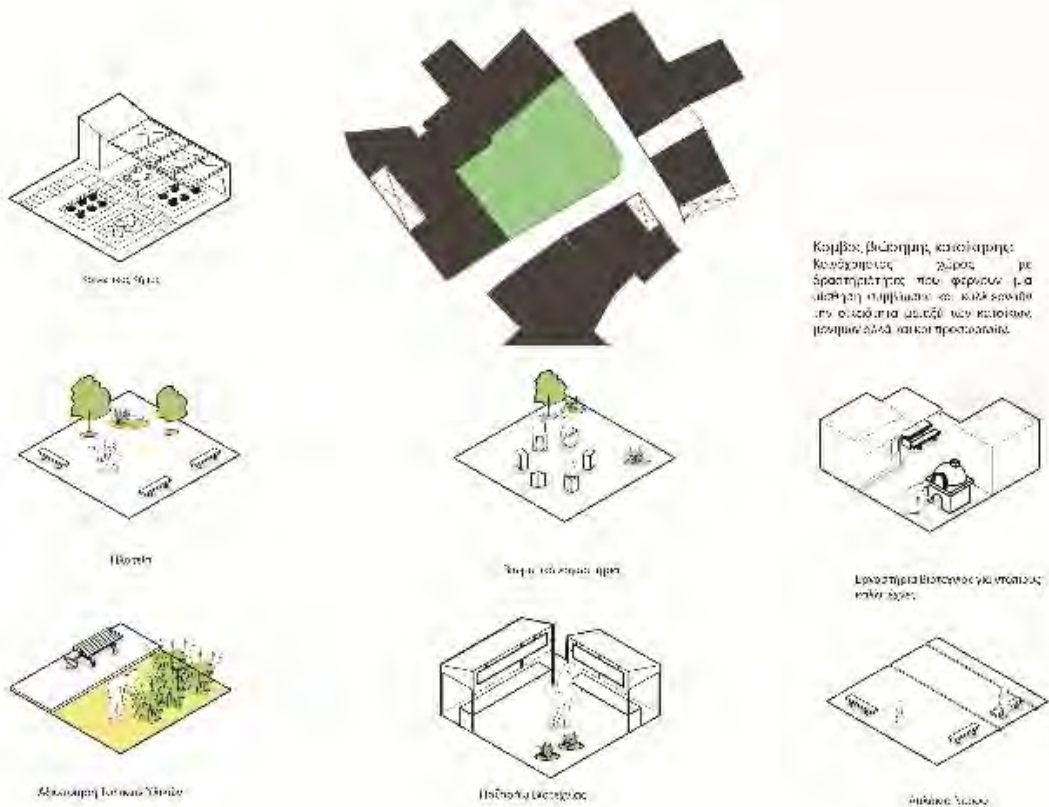
Figure 01.

Students work showcasing proposed revitalization initiatives as outlined in project description above.





**Figure 02.** Students work showcasing proposed intervention with reuse and infill actions and the introduction of new programs.



**Figure 03.** Students work showcasing proposed integration between the built and natural fabric.



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Professor:  
Maria Philokyprou

D09  
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# VERNACULAR ARCHITECTURE AND CONTEMPORARY ISSUES

## COURSE ID CARD

semester	Fall
ECTS	5
status	compulsory

### COURSE POSITION

#### Study program

Integrated Master of  
Architecture

#### Level

undergraduate

#### Academic Year

2020-2021

### COURSE TYPES

- ▶ Lecture
- ▶ Micro Design Studio
- Theoretical Project
- Practical Work
- Seminar
- Workshop
- Summer School
- Other

### ☰ Course Description

The detailed analysis of traditional settlements, as well as the principles for their conservation and reuse, form part of the course Vernacular Architecture and Contemporary Issues. The course includes theoretical teaching and analysis of relevant issues in the frame of group and individual projects which are essential for the development of critical thinking and research skills.

In the first phase of the project, each group of students selects and conducts an analysis of a traditional settlement. In the second phase, each group selects a vernacular dwelling that needs conservation, which is captured through photographs and drawings, and prepares a scenario of reusing the dwelling.

The combination of theory and practical implementation through projects forms a pedagogical process and educational method which leads to a holistic knowledge on the subject. One of the key aims of this course is to provide students with basic knowledge and effective working methods to recognize, analyse and manage vernacular buildings and complexes. Teaching about conservation and restoration also aims at stimulating the consciousness on the possibilities of reuse of existing buildings as a key component of a sustainable approach to the built environment.

# DEMONSTRATION.

## NOTIONS

- Cultural Heritage

## HERITAGE TYPES

- Vernacular heritage

## DESIGN ACTIONS

- Rehabilitation
- Adaptive Reuse

## TOOLS

- Survey

## ≡ Student Group

Dimitris Nicolaou, Anastasia Mathaiou, Katerina Gregoriou

## ≡ Project Title

The analysis of the traditional settlement of Arsos and proposal for the reuse of a vernacular dwelling of the settlement

## ≡ Project Description

The traditional settlement selected for analysis is Arsos, a mountainous village. The analysis of a traditional settlement, includes the analysis of urban development, public outdoor areas - squares (church squares) and streets, as well as the investigation of the typology, morphology and construction of buildings (mainly residential units) etc. In the second phase of the project, a vernacular dwelling that needs maintenance was selected, which is captured through photographs and drawings, and a scenario of conserving and reusing the dwelling under study was prepared. In the buildings selected, small scale changes were proposed to accommodate the new uses (such as new lightweight structures above ruins). At the same time, contemporary structures were added which are distinguished from the existing vernacular dwellings but at the same time being in harmony with the traditional settlement.

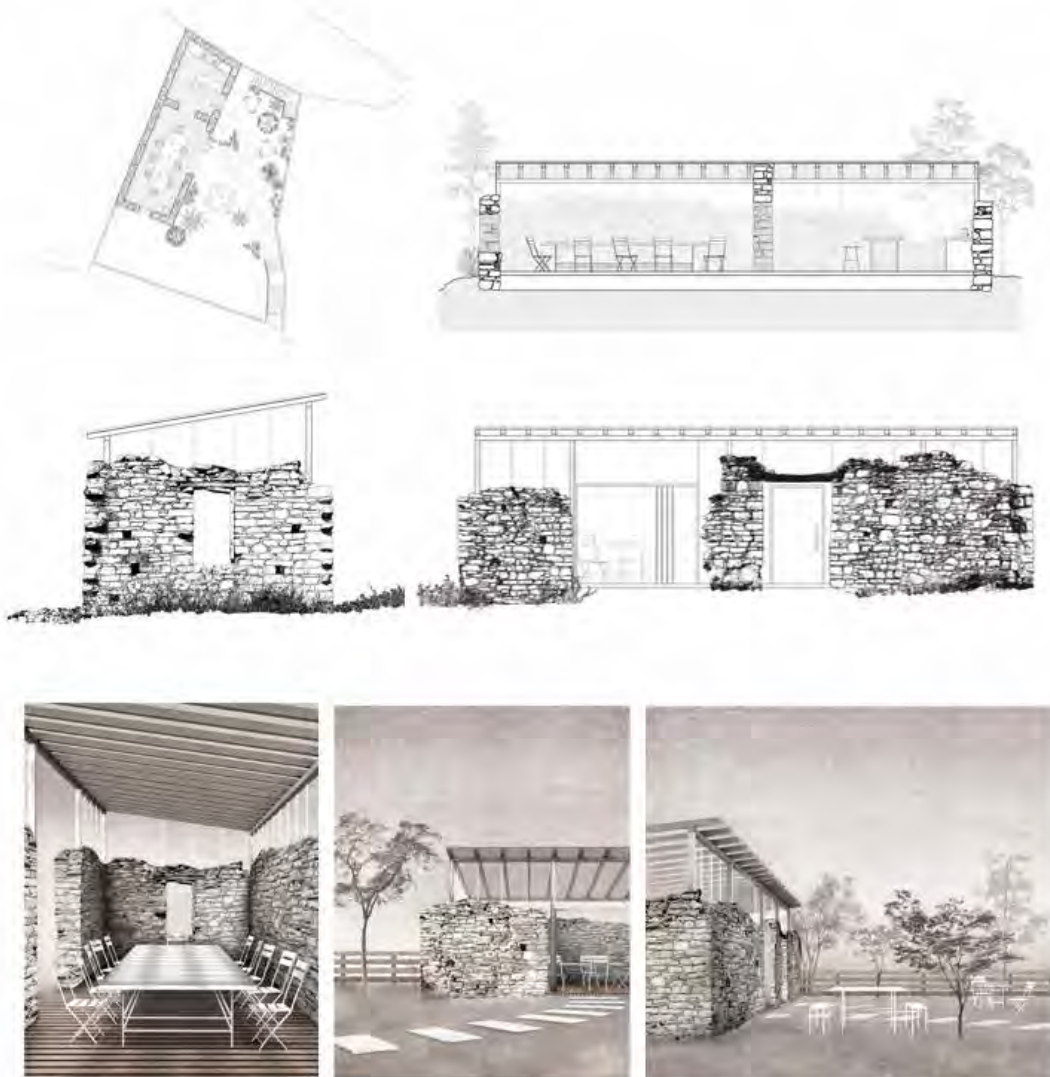


**Figure 01.**

Arsos. Photos of vernacular dwellings of the village photos of ruins (prepared by the team of students)



**Figure 02.** Arsos. Analysis of the traditional settlement (urban analysis, streets) (prepared by the team of students)



**Figure 03.** Arsos. Vernacular dwelling converted to a small laboratory (prepared by Dhimitris Nicolaou)



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Professor:  
Maria Philokyprou

D10  
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# BUILDINGS IN HISTORY

## COURSE ID CARD

semester	Fall
ECTS	8
status	optional

### COURSE POSITION

#### Study program

Integrated Master of  
Architecture

#### Level

postgraduate

#### Academic Year

2020-2021

### COURSE TYPES

- ▶ Lecture
- ▶ Micro Design Studio
- Theoretical Project
- Practical Work
- Seminar
- Workshop
- Summer School
- Other

### ☰ Course Description

This course aims at the development of a critical and interpretive approach to studying remarkable architectural works of previous eras, while simultaneously acquiring the necessary knowledge for the conservation and reuse of such buildings. A systematic analysis of historic buildings and of the parameters that affect their form is applied. The course covers subjects related to contemporary trends, as well as theories on the restoration and reuse of historic buildings, setting out the general principles and methodology for their comprehensive protection. For this course, students need to attend lectures, participate in theoretical discussions, and conduct critical analyses of selected essays and restoration projects. For the academic year 2021-2022, students were assigned a project to study specific remarkable historic urban and rural mansions. The successive phases of the selected case studies were analysed, their values were documented and the procedure of their conservation and repair was critically studied. Finally, suggestions regarding various ways to upgrade these buildings were made, particularly through the removal of recent additions and interventions that negatively affected the unity of the complexes. New proposals were also prepared by the students to enhance the values of the buildings. One of the main aims was to re-establish the original relationship between the structures and the plots' open spaces. This was done through the erection of new semi-open structures adjacent to the yards either on the perimeter of the plots or attached to the existing buildings.

# DEMONSTRATION.

## NOTIONS

- Cultural Heritage

## HERITAGE TYPES

- Vernacular heritage
- Industrial heritage
- Modern heritage

## DESIGN ACTIONS

- Rehabilitation
- Adaptive Reuse
- Conservation
- Restoration

## TOOLS

- Survey

## ≡ Student Group

Chara Ilias, Fotini Petrou, Paisia Ioannidou

## ≡ Project Title

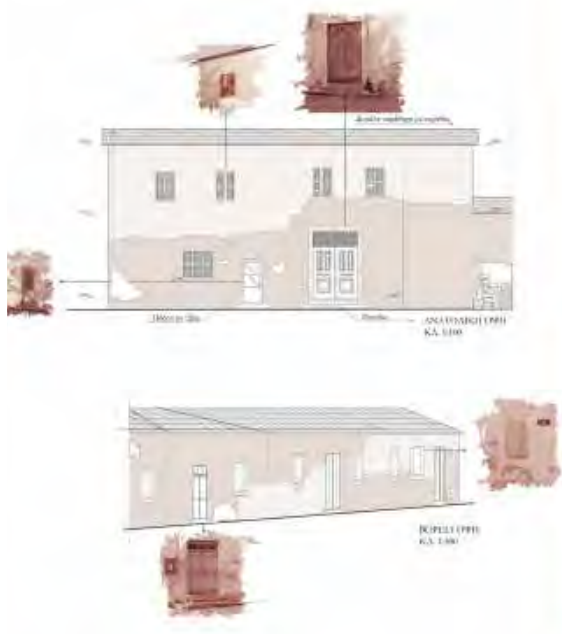
Analysis and proposal for the reuse of an agricultural mansion in the village of Episkopi, Limassol, as a hostel

## ≡ Project Description

The building under study is located in Episkopi and originally functioned as a residence (rural mansion). Later on, it operated as a restaurant and eventually was converted into an inn. The changes that took place in the building, although largely respecting its social values (according to the principles of international declarations and conventions for conservation), as well as its public presence had a negative impact on the relationship between the building and its interior courtyard. In the students' proposal, provisions were made to restore the previous use of the building as an inn and strengthen the relationship between the building and its central courtyard. The addition of a new wing that would surround the yard would enhance the concept and function of the outdoor space. These proposed additions convey the contemporary period of erection, differing from the original building, yet simultaneously harmonising with it according to the principles of international conventions and declarations of architectural heritage (Charter of Venice, Bourra Charter, Declaration of Amsterdam, etc.).



Η οικοδομή πριν τα έργα αποκατάστασης



Πρόταση αποκατάστασης



**Figure 01** An agricultural mansion in the traditional settlement of Episkopi, Limassol. Analysis and proposal for its reuse as a hostel (prepared by the team of students)



ARISTOTLE  
UNIVERSITY OF  
THESSALONIKI

AUTH

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Professors:

K. Sakantamis (Associate Prof),

V. Vassiliadis (Researcher),

K. Axarli (Emeritus Prof.)

D11

**demonstrations**

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# PRINCIPLES OF BIOCLIMATIC DESIGN OF BUILDINGS AND OPEN SPACES

## COURSE ID CARD

semester	Autumn
ECTS	3
status	compulsory

### COURSE POSITION

#### Study program

Integrated Master in Architecture (5yr- Diploma of Architect Engineer)

#### Level

undergraduate

#### Academic Year

2022-2023

### COURSE TYPES

- ▶ Lecture
- ▶ Design Studio
- ▶ Theoretical Project
- ▶ Practical Work
- ▶ Seminar
- ▶ Workshop
- ▶ Summer School
- ▶ Other

### ☰ Course Description

The course aims at introducing basic principles of environmental design. Through the course, students are exposed to: i) passive/active building techniques to meet the energy demands for heating, cooling and lighting, ii) processes of creating thermal, visual and acoustic comfort conditions, in relation to climatic and environmental elements, building operation, architectural composition and/or construction, and iii) the environmental function of the immediate open space that affects and is affected by buildings.

Since 2022-23 the 4 coursework assignments deal with traditional settlements and vernacular architecture, necessitating that students select a settlement and a particular listed building within it, a paradigm of vernacular architecture, which they then analyse for its environmental response.



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Teachers:  
Konstantinos Sakantamis, Alkmini Paka,  
Maria Dousi, Kleo Axarli,  
Angeliki Chatzidimitriou,  
Sofoklis Kotsopoulos, Natalia Chrysikou,  
Dimosthenis Sakos, Stavros Apotsos,  
Iordanis Sinamidis

D12  
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# HERSUS WORKSHOP: RESILIENCE AND FUTURE HERITAGE

## COURSE ID CARD

semester	Autumn
ECTS	3
status	optional

### COURSE POSITION

#### Study program

Integrated Master in Architecture (5yr- Diploma of Architect Engineer)

#### Level

postgraduate

#### Academic Year

2022-2023

### COURSE TYPES

- ▶ Lecture
- Design Studio
- Theoretical Project
- Practical Work
- Seminar
- ▶ Workshop
- Summer School
- Other

### ☰ Course Description

The 3rd Hersus Workshop was included in the framework of Workshops provided as optional modules integrated in the curriculum of the School of Architecture 5yr Integrated Master. It focused on the centre Thessaloniki, on the Kapani Market, approaching it as a useful resource in achieving social, economic, cultural, environmental sustainability and resilience for the city. The case study employs sustainability and resilience indicators to build upon /evaluate the most recent major urban design interventions in the area, which took place in the context of Thessaloniki's role as the Cultural Capital of Europe (1997), but also on bottom-up approaches that have emerged recently, which aim to regenerate the area through cultural events.

## DEMONSTRATION.

### NOTIONS

- Urban Narratives
- Urban Patterns
- Cultural and Collective Memory

### HERITAGE TYPES

- Tangible and Intangible Heritage
- Modern Heritage
- Emerging Heritage

### DESIGN APPROACHES

- Community Building and Representation
- Restoration
- Continued Use
- Public Advocacy for Social Participation
- Recycling / Up-cycling
- Design for all

### DESIGN ACTIONS

- Regeneration
- Temporary Planning and meanwhile Spaces
- Passive / Active Sustainable Design
- Renewable Energy Integration
- Redevelopment
- Regeneration

### Student Groups

Group I: Pilar Cañada Galiano, USE; Thalia Kalfa, AUTH; Uros Kulic, UB-FA; Olimpia Maruzzi, IUAV; María Morales Marchal, USE; Ariadni Nikou, AUTH; Marios Tsangaris, UCY

Group II: Ana Jiménez García, USE; Alonso Izquierdo Priale, USE; Jelena Lazic, UB-FA; Sofia Mermiga Ageli, UTh; Fotini Mpoukoutsou, AUTH; Dimitris Nikolaou, UCY

Group III: Francesco Antonio Bragagna, IUAV; Marios Solomou, UCY; Ana Dimić, UB-FA; Belen Ramirez Lopez, USE; Pedro Conejo Miranda, USE; Chrysoula Karanikola, AUTH; Leda Demetriadou, AUTH

### Project Titles

Group I – Agora / Market Fabric and Interior

Group II - Urban Interactions / Routes, paths & pedestrian ways

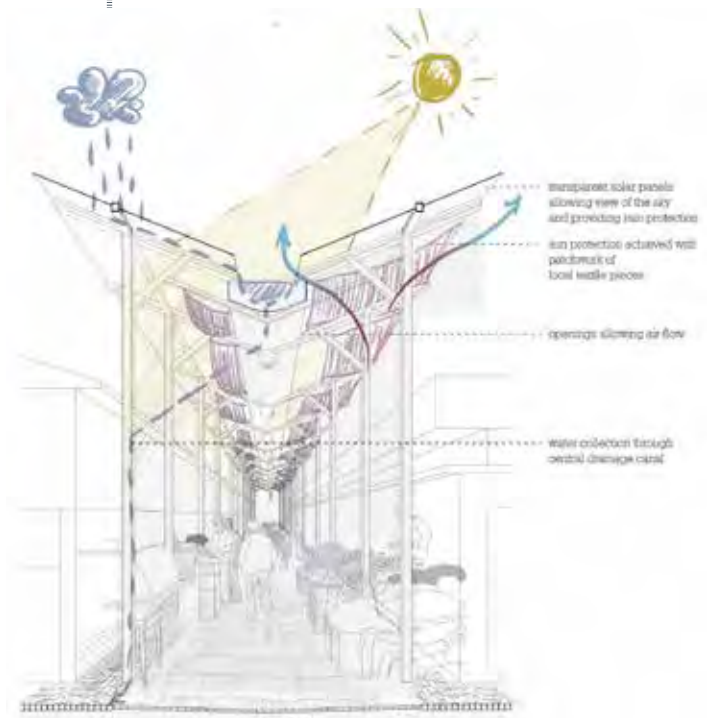
Group III – Skyline / Boundary Conditions

### Project Description

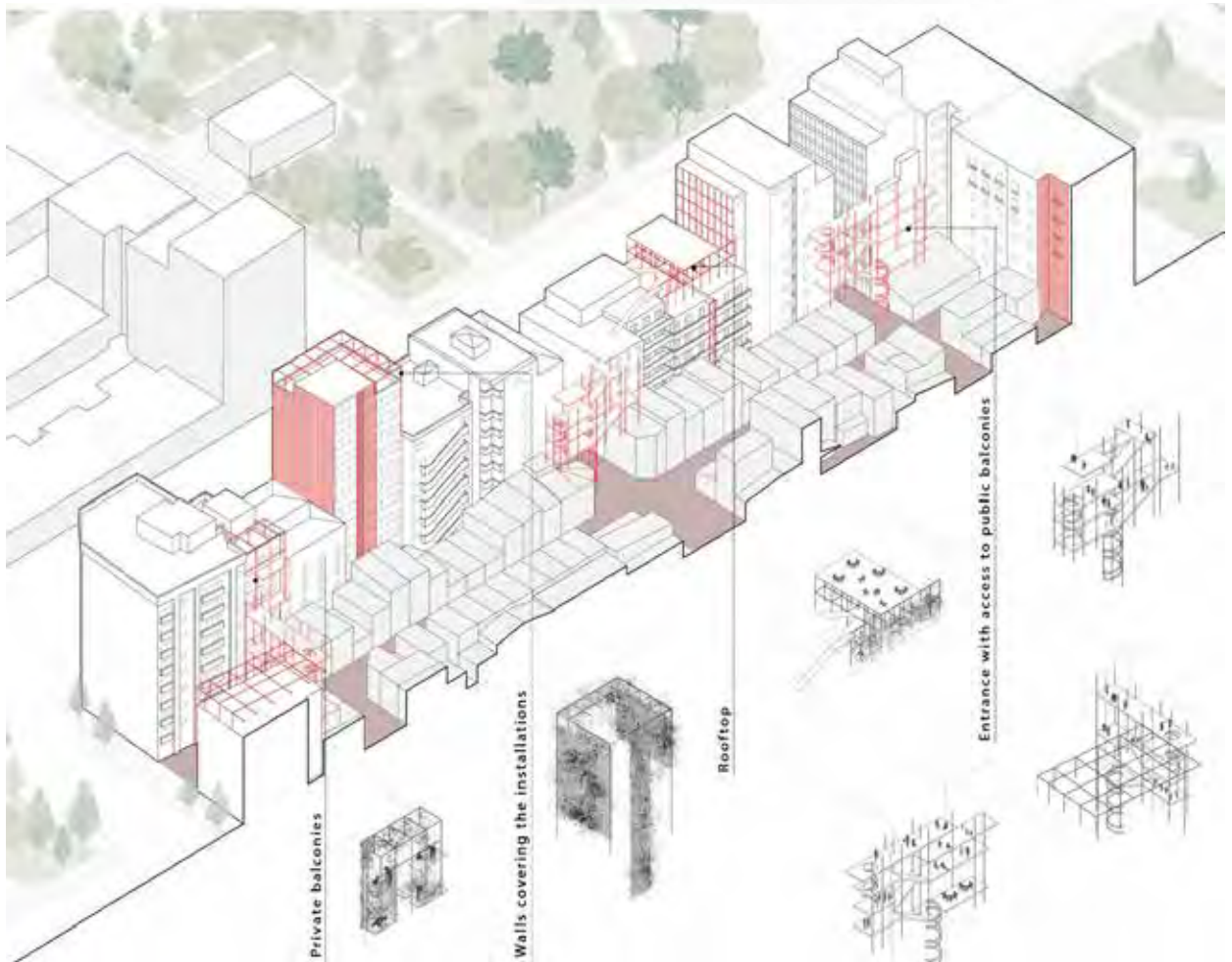
The focus on the historic central markets links the notions of Cultural Identity, Resilience, and Future Heritage. These entail an elaboration on the evolution of Urban Heritage in the establishment of a multifaceted Heritage Site, where Modern Heritage is striving for attention within an area densely occupied by Historic Monuments, whereby Tangible and Intangible Heritage are equally important for the preservation of cultural identity. In order to contemplate on the aforementioned notions and heritage types, student participants formed three international teams, each of which focused on a specific task/approach. These stem from the main components of the Kapani superblock: the Agora, the Skyline, and the Urban Inter-Actions that take place within routes/paths that link the study area with its surroundings.

**Figure 01.**  
Hersus WSIII –  
Thessaloniki – Group I -  
Agora / Market Fabric  
and Interior





**Figure 02.** Hersus WSIII – Thessaloniki – Group II- Urban Interactions / Routes, paths & pedestrian ways



**Figure 03.** Hersus WSIII – Thessaloniki – Group III - Skyline / Boundary Conditions



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Teachers:  
Mar Loren-Méndez  
Roberto F. Alonso-Jiménez  
Celia Chacón-Carretón

D13  
**demonstrations**  
book of courses

# ARCHITECTURAL HISTORY, THEORY AND COMPOSITION: CONTEMPORARY THEORETICAL APPROACHES TO SUSTAINABLE AND CREATIVE CITIES

## COURSE ID CARD

semester	9
ECTS	6
status	compulsory

### COURSE POSITION

#### Study program

Grado en Fundamentos  
de Arquitectura

#### Level

undergraduate

#### Academic Year

2022-2023

### COURSE TYPES

Lecture

Design Studio

► Theoretical Project

Practical Work

Seminar

Workshop

Summer School

Other

### ☰ Course Description

The course focuses on critical interdisciplinary knowledge of the contemporary city approaching both history and current development, addressing it as a cultural manifestation within the complex framework of geopolitical, economic, technological and social transformation. The first part of the practicum is focused on international case studies of theories for sustainable intervention of the city: the students work on a book, its author and his/her architectural theories to urban sustainable development, to the extent that they are capable of explaining it to the class. Based on a methodology of gamification, the students design a participatory creative action in order to assure and evaluate the learning process.

## DEMONSTRATION 01.

### NOTIONS

- Cultural and Collective Memory
- Urban Narratives
- Resilience

### HERITAGE TYPES

- Performative and Affective Heritage
- Urban Heritage

### DESIGN APPROACHES

- Multiscale Design Approach
- Community Building and Representation
- Renewable Energy Integration

### DESIGN ACTIONS

- Adaptive Reuse
- Public Advocacy for Social Participation
- Circular Economy

### TOOLS

- Image Rectificatio
- Collaborative Workshop
- Artistic Approaches

### Student Group

Cristina Manuel de Céspedes-García, María Gabriela Vieira-Maroun, Alejandra Santander-Gago, Ana Sanz De Frutos-Márquez

### Project Title

Remembering the future

### Project Description

The project developed consists of a gamification of the book "Cities for a Small Planet" by Richard Rogers. After a creative reading process, it can be divided into two parts; the first is a participatory dynamic obtained from the book exhibition, made up of collages that guide the student through a set of stands related to transversal ideas that were identified in the book an later transferred to the digital environment; while the second part is a didactic game made up of a board, tokens, jokers and a dice. In addition, both parties come together in the so-called "physical object" that seeks to make readers and players, who now have it in their hands, feel the experience that was lived in person, being able to understand the content of the book and the author's thoughts.



**Figure 01.**  
Exhibition of the book "Cities for a Small Planet" and game process.  
Source: the authors

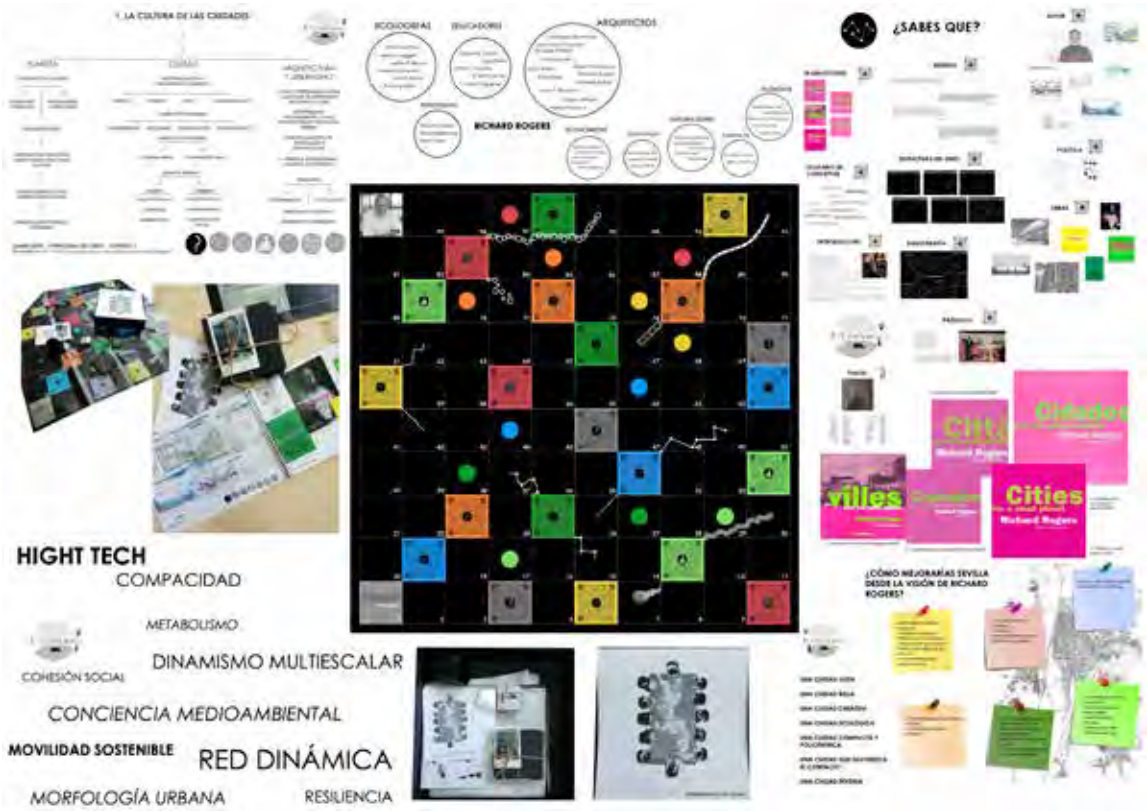


Figure 02 Game board "Remembering the future" with informational content. Source: the authors



Figure 03 Virtual display of the interactive exhibition. Source: the authors





Figure 02 Game and presentation. Source: the authors



Figure 03 The game in action. Source: the authors



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Teachers:  
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Roberto F. Alonso-Jiménez  
Celia Chacón-Carretón

D14  
**demonstrations**  
book of courses

# ARCHITECTURAL HISTORY, THEORY AND COMPOSITION: CREATIVE AND SUSTAINABLE APPROACHES TO MODERN HERITAGE

## COURSE ID CARD

semester	9
ECTS	6
status	compulsory

### COURSE POSITION

#### Study program

Grado en Fundamentos  
de Arquitectura

#### Level

undergraduate

#### Academic Year

2022-2023

### COURSE TYPES

Lecture

Design Studio

► Theoretical Project

Practical Work

Seminar

Workshop

Summer School

Other

### ☰ Course Description

The course focuses on critical interdisciplinary knowledge of the contemporary city approaching both history and current development, addressing it as a cultural manifestation within the complex framework of geopolitical, economic, technological and social transformation. The second part of the practicum is focused on local urban heritage case studies. The method integrates creativity with scientific methods in the development of a documental research and heritage characterization, which leads to the design of creative strategies for the regeneration of the city. The students develop conceptual creative mappings and a video focused on a specific value of contemporary heritage. In a constantly reformulated field such as heritage studies, creativity allows the student to adapt to new emergent heritage and sustainable theories with a distinct lens thus understanding historical values in order to make their own intervention proposals.

## DEMONSTRATION 01.

### NOTIONS

- Cultural and Collective Memory
- Resilience
- Cultural Identity

### HERITAGE TYPES

- Industrial Heritage
- Tangible and Intangible Heritage
- Cultural Landscape
- Modern Heritage

### DESIGN APPROACHES

- Environmentally Responsive Design
- Historical Urban Landscape
- Multiscale Design Approach

### DESIGN ACTIONS

- Integral Heritage Protection
- Conservation
- Adaptive Reuse
- Nature Based Solutions
- Developing Cultural Routes and Itineraries

### TOOLS

- Image Rectification
- Morphogenesis Study
- Mapping, Documenting, Cataloguing
- Artistic Approaches

### ≡ Student Group

Cristina Manuel de Céspedes-García, María Gabriela Vieira-Maroun, Alejandra Santander-Gago, Ana Sanz De Frutos-Márquez

### ≡ Project Title

Industrial fencing of Peñarroya-Pueblonuevo, Córdoba, Spain.  
*Vestiges of the past - colours of the present*

### ≡ Project Description

This project consists of the revaluation of the Industrial Heritage through sustainable theories of intervention in Peñarroya-Pueblonuevo, Córdoba, Spain. After a multiscale historical analysis of mining activities and their relationship with rail transport, accompanied by a visit to the site, it was possible to approach the current reality of the industrial site, which still retains vestiges of its past. It is intended to create itineraries marked by the colours of the place, its minerals, the bricks of the ruins and the vegetation that has emerged after the abandonment of industrial activities. That is why a simple module is created with the possibility of grouping it in different ways to create support for cultural and educational activities.

### Figure 01.

Representative image of industrial fencing 'Peñarroya-Pueblonuevo'. Source: the authors





**Figure 02** General plan of 'Vestiges of the past - colours of the present'. Source: the authors



**Figure 03** Collages of the global proposal. Source: the authors

## DEMONSTRATION 02.

### NOTIONS

- Cultural and collective memory
- Cultural heritage

### HERITAGE TYPES

- Industrial heritage
- Heritage site
- Modern Heritage

### DESIGN APPROACHES

- Climate sensitive design
- Community building and representation

### DESIGN ACTIONS

- Temporary planning and meanwhile spaces
- Developing Cultural Routes and Itineraries

### TOOLS

- Image Rectification
- Mapping, Documenting, Cataloguing

### Student Group

Carmen Arranz-Cob, Juan Manuel Martín-Rincón,  
Antonio Sánchez-Carmona

### Project Title

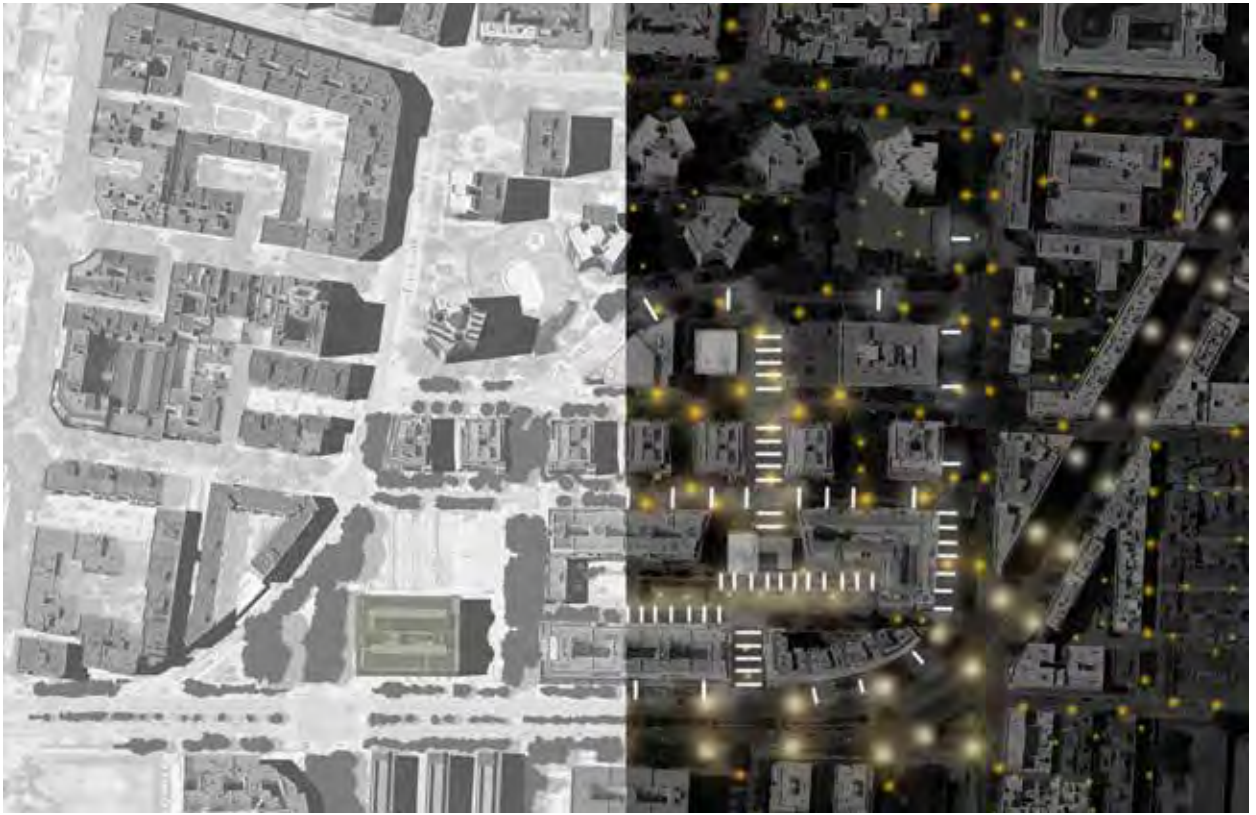
Catalan Company's Power Plant and Gas Factory, Sevilla, Spain.  
*Lights and shadows*

### Project Description

Located next to one of Sevilla's most important roads for its connectivity, the Catalan Company's Power Plant and Gas Factory is a highly well conserved example of the city's industrial modern heritage. Designed by the well known spanish architect Aníbal González, the three remaining buildings of the original plant are integrated in the residential area where they are located, with contemporary uses dedicated to the neighbourhood. After reflecting on the building and site's values, the project ponders about how well integrated the remaining buildings are in the city, thinking about new and creative approaches to these. Using both natural and artificial light as a memory element, the project is based on temporary itineraries guided by light at night and shadows during the day, that recreates the original urban trace of the power plant so that people can learn and discover the history of these industrial buildings.

**Figure 01.**  
Introduction and location  
of the Catalan Company's  
Power Plant and Gas  
Factory





**Figure 02** Mapping the day and shadow versus the night and light



**Figure 03** Representative image of the project. Source: the authors



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Mar Loren-Méndez  
Adrián Rodríguez-Segura

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# ARCHITECTURAL HISTORY, THEORY AND COMPOSITION.

## COURSE ID CARD

semester	7
ECTS	6
status	compulsory

### COURSE POSITION

#### Study program

Grado en Fundamentos  
de Arquitectura

#### Level

undergraduate

#### Academic Year

2021-2022

### COURSE TYPES

Lecture

Design Studio

► Theoretical Project

Practical Work

Seminar

Workshop

Summer School

Other

## THE HISTORICAL READING OF LIVING. THE CITY AS RESIDENTIAL STRATIFICATION.

### ☰ Course Description

The course integrates the urban dimension of the history of architecture and the heritage approach for contemporary knowledge of architecture and the historic city. It also proposes a critical approach to the history of architecture as a manifestation of culture, finally pointing to an interdisciplinary vision and descending to the scale of the house in the integration processes of the architectural and urban scale. The first part of the practicum focuses on monographic residential case studies, all located in a single city as a support, proposing the understanding of its complexity from residential architectures from different periods. The work allows the students to reflect on the city as an historical stratification which characterizes our present.

# DEMONSTRATION.

## NOTIONS

- Cultural and collective memory
- Urban Narratives
- Cultural Identity
- Cultural Enhancement
- Cultural Heritage

## HERITAGE TYPES

- Performative and Affective Heritage
- Tangible and Intangible Heritage
- Urban Heritage
- Monumental Heritage
- Archaeological Heritage

## DESIGN APPROACHES

- Community Building and Representation
- Historical Urban Landscape- HUL.

## DESIGN ACTIONS

- Conservation
- Restoration
- Adaptive Reuse
- Consolidation
- Heritage Management

## TOOLS

- Morphogenesis Study
- Artistic approaches

## Student Group

Beatriz Carmona Rivero, María Teresa Romero Bazán, Jaime Sánchez Cid Artillo

## Project Title

Museo Picasso Málaga: Museum Planning in Heritage Spaces.

## Project Description

Considering in the classroom the inquiry into the architecture of living through the case study of the city of Malaga. In the case of the Palace of the Counts of Buena Vista, currently the Picasso Museum of Malaga, it focuses on studying the Renaissance layer of the city, and its domestic architecture. It also addresses the rehabilitation of areas of heritage value with the aim of turning them into a museum, its typology and the different visions of recovered heritage, from archaeology to contemporary architectural activity. Intervention in the historic center of cities. The transformation of the urban environment in the project of Gluckman and Cámara Delgado. Common places of the different museums dedicated to the work of Picasso and significance of Malaga in terms of its museum projection.



**Figure 01.**  
Studio assembly of the building and its urban environment

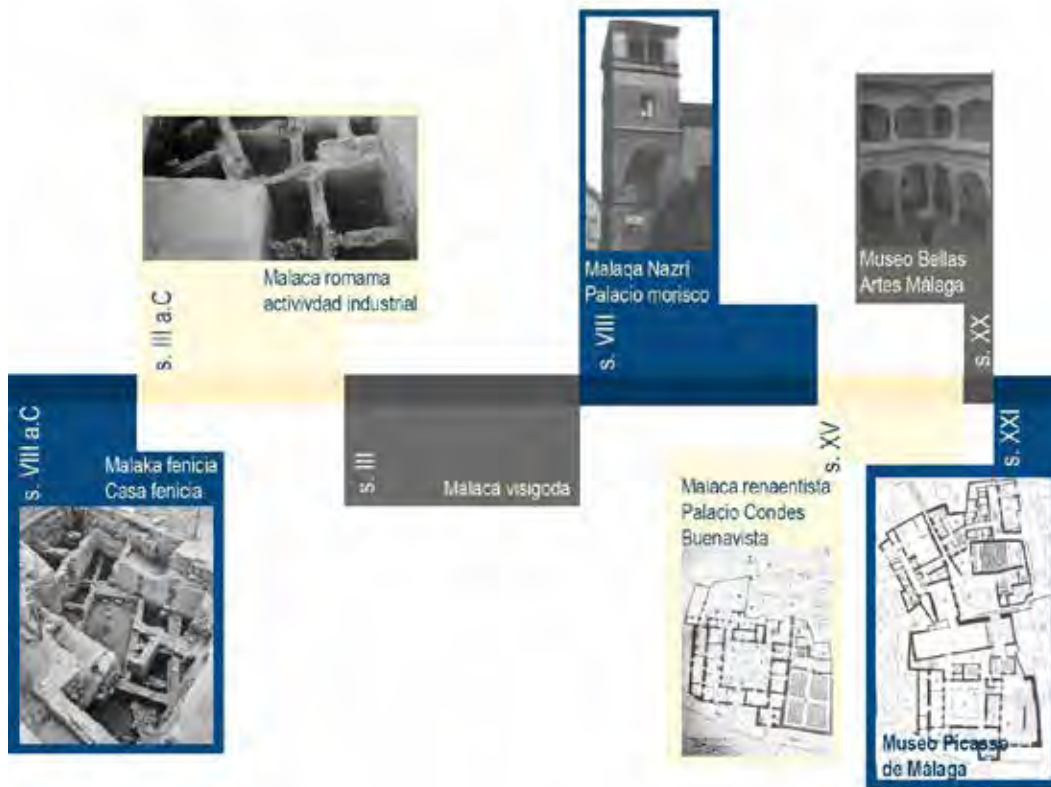


Figure 02. Temporary evolution of the building.



Figure 03. Urban context of the museum.



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Adrián Rodríguez-Segura

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# ARCHITECTURAL HISTORY, THEORY AND COMPOSITION.

## READING AS AN ARCHITECTURAL ACTION.

### COURSE ID CARD

semester	7
ECTS	6
status	compulsory

#### COURSE POSITION

##### Study program

Grado en Fundamentos  
de Arquitectura

##### Level

undergraduate

##### Academic Year

2021-2022

#### COURSE TYPES

Lecture

- Design Studio
- Theoretical Project
- Practical Work
- Seminar
- Workshop
- Summer School
- Other

#### ☰ Course Description

The course integrates the urban dimension of the history of architecture and the heritage approach for contemporary knowledge of architecture and the historic city. It also proposes a critical approach to the history of architecture as a manifestation of culture, finally pointing to an interdisciplinary vision and descending to the scale of the house in the integration processes of the architectural and urban scale. The second part of the practicum introduces the students to methodologies of urban characterization, developed by different authors. Each students team analyses a specific methodology, through the study of an author and her/his historical publication of reference. The team design a participatory action to be applied for the rest of the class in an urban itinerary, to test their understanding of the authors, and the methodologies developed, extending cooperative work to the whole group.

# DEMONSTRATION 01.

## NOTIONS

- Cultural and Collective Memory
- Urban Narratives
- Cultural Identity
- Cultural Enhancement
- Cultural Heritage

## HERITAGE TYPES

- Modern Heritage
- Performative and Affective Heritage
- Urban Heritage
- Monumental Heritage
- Archaeological Heritage

## DESIGN APPROACHES

- Community Building and Representation
- Historical Urban Landscape- HUL

## DESIGN ACTIONS

- Adaptive Reuse
- Developing Cultural Routes and Itineraries

## TOOLS

- Morphogenesis Study
- Artistic approaches
- Collaborative workshop - CHARRETTE

## ≡ Student Group

Beatriz Carmona Rivero, María Teresa Romero Bazán, Jaime Sánchez Cid Artillo

## ≡ Project Title

HASTA EL MUSEO PICASSO MÁLAGA, RECORRER LA CIUDAD DESDE EL HABITAR.

TO THE PICASSO MUSEUM IN MALAGA, TO WALK THROUGH THE CITY FROM THE INHABITANT'S POINT OF VIEW.

## ≡ Project Description

Considering the inquiry into the architecture of living in the classroom through the case study of the city of Malaga, significant buildings belonging to different eras are distributed to carry out an itinerary in which to travel a section of the city to recognize the building and create a activity based on a recognized book on urbanism.

After reading Gordon Cullen's Concise Townscape, we created a triptych, a participatory activity in which we integrated the use of photography and drawing in which we proposed that each student freely interpret some urban terms that Cullem describes. At the end of the activity, notions about the chosen terms are given and students are encouraged to contribute their own conclusions.



**Figure 01.**  
Document prepared for carrying out the activity



Figure 02. Images during the activity in Malaga

TÉRMINO	Punto focal	Posesión	Cambio de nivel	Vista grandiosa	Cierre	Árboles integrados	Incidente
FOTOS DEL ITINERARIO							
REFERENCIAS DEL LIBRO							
	Simbolo vertical de congregación de un espacio.	Apropiación de la calle a través de la actividad y edificaciones.	Interrupción de las alturas de las edificaciones.	Imágenes que crean sentimientos de poderío e omnipresencia.	Corte del sistema lineal del trazado urbano.	Relación de la arquitectura con el árbol como organismo cambiante....	Elemento que capta la mirada.

Figure 03. Results and conclusions after carrying out the activity

## DEMONSTRATION 02.

### NOTIONS

- Cultural and Collective Memory
- Urban Narratives
- Urban Patterns
- Cultural identity
- Cultural Heritage

### HERITAGE TYPES

- Performative and Affective Heritage
- Urban Heritage

### DESIGN APPROACHES

- Historical Urban Landscape - HUL
- Visual Comfort Design

### DESIGN ACTIONS

- Redevelopment
- Heritage Management
- Developing Cultural Routes and Itineraries

### TOOLS

- As-Built / As-Found Recording
- Mapping, Documenting, Cataloguing
- Artistic approaches

### ≡ Student Group

Andrés Antonio Sánchez Alvarado, Sergi Delgado Bitata, Mohamed Taha Lafrarji

### ≡ Project Title

A pleasant perception of Malaga

### ≡ Project Description

This Project consists of carrying out an itinerary and various activities around the city of Malaga.

The tour and the activities had to be designed in relation to a work (which the teachers gave us to choose) by a prominent architect, in our case *The image of the city* by Kevin Lynch, who establishes that the perception we have of a city is influenced by the following 5 elements: node, district, path, landmark and edge. Therefore, we proposed a tour in which we could observe all these elements. In addition, we proposed two activities, one in which each student had to detect an example of each element during the tour and point it out the map that we gave them, and another in which they had to ask people on the street for an example of one of the elements.



**Figure 01.**  
Studio assembly of the building and its urban environment

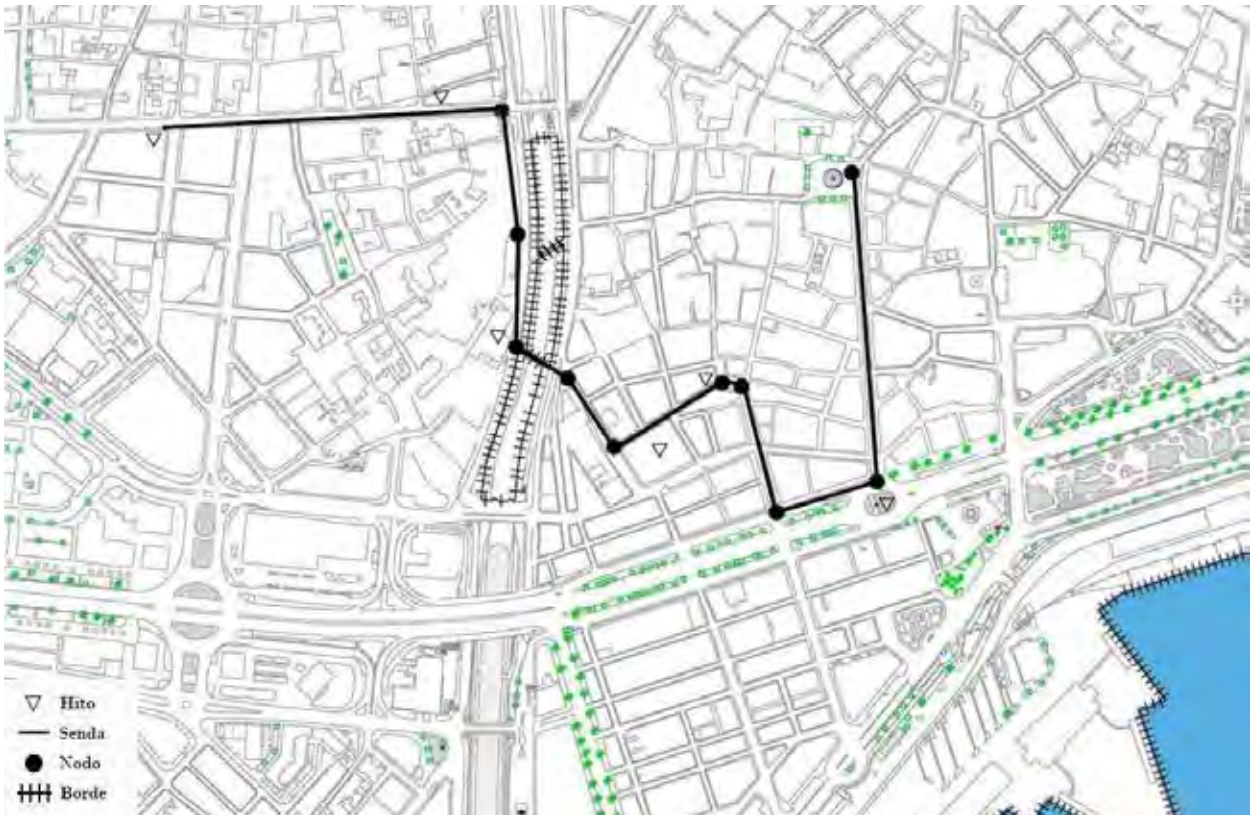


Figure 02. Temporary evolution of the building.



Figure 03. Urban context of the museum.



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# ARCHITECTURAL HISTORY, THEORY AND COMPOSITION.

## HISTORICAL RESEARCH, DAILY ACTION OF ARCHITECTURAL WORK.

### COURSE ID CARD

semester	7
ECTS	6
status	compulsory

#### COURSE POSITION

##### Study program

Grado en Fundamentos  
de Arquitectura

##### Level

undergraduate

##### Academic Year

2021-2022

#### COURSE TYPES

Lecture

Design Studio

► Theoretical Project

Practical Work

Seminar

Workshop

Summer School

Other

#### ☰ Course Description

The course integrates the urban dimension of the history of architecture and the heritage approach for contemporary knowledge of architecture and the historic city. It also proposes a critical approach to the history of architecture as a manifestation of culture, finally pointing to an interdisciplinary vision and descending to the scale of the house in the integration processes of the architectural and urban scale. In the third part of the practicum the student develops an essay that aims to apply in an individual basis the methods for historical and heritage studies both on architectural and urban scale. The student works on a case study of her/his own city: the paper integrates the documentary and experiential methodologies developed in the context of the course to an accessible and nearby building or historic city, making it specific to the new object of study.

# DEMONSTRATION.

## NOTIONS

- Urban Narratives
- Heritage genalogy

## HERITAGE TYPES

- Modern Heritage
- Documentary Heritage
- Urban Heritage

## DESIGN APPROACHES

- Historical Urban Landscape -HUL

## DESIGN ACTIONS

- Heritage Management

## TOOLS

- Mapping, Documenting, Cataloguing
- As-Built / As-Found Recording

## ≡ Student Group

Sergi Delgado Bitata

## ≡ Project Title

Josefa Mayol House

## ≡ Project Description

This Project consists in the study of the Josefa Mayol House, a rationalist-style house located in Palma (Mallorca), which is characterized for being one of the first and most renowned houses of this style, so much so that it is a well-listed municipal building.

In this Project, in addition to the study of the house and comparing it with other buildings with similar characteristics, the historical, urban and architectural context that comprises the house is explained. A time troubled by the Spanish Civil War, the expansion of the city of Palma and the arrival of the rationalist style in Mallorca. The biography of Francesc Casas, architect of the Josefa Mayol house, is also briefly explained, emphasizing his architectural career, his influences and some of his most important works.



**Figure 01.**  
Josefa Mayol House.  
Own elaboration.



**Figure 02.** Josefa Mayol House elevations. Own elaboration



**Figure 03.** Josefa Mayol Floor. Own elaboration.



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Architectural history, theory and  
Composition: Mar Loren-Méndez, Roberto  
F. Alonso-Jiménez, Domingo Galán-Caro  
Urban Planning: Irene Mendoza-García  
Architectural Projects: Miguel Angel de la  
Cova-Morillo-Velarde  
Drawing (Architectural Graphic Expression):  
Esteban de Manuel-Jerez

D18

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# TRANSVERSAL DESIGN STUDIOS. DESIGNING NEW SUSTAINABLE URBAN-TERRITORIAL SCENARIOS

## COURSE ID CARD

semester	9
ECTS	6
status	compulsory

### COURSE POSITION

#### Study program

Grado en Fundamentos  
de Arquitectura

#### Level

undergraduate

#### Academic Year

2022-2023

### COURSE TYPES

Lecture

► Design Studio

Theoretical Project

Practical Work

Seminar

Workshop

Summer School

Other

### ☰ Course Description

The course contents are focused on the design of new sustainable urban-territorial scenarios with a heritage dimension. It focuses on innovative city models to take into account site cultural and heritage values. The main objective is to deepen in the practice and theory of city design project with heritage and sustainable values, attending to inherited situations whose permanence is of interest to the community. This is achieved by proposing projects strategies in three scales -metropolis, city and neighbourhood- with repercussions on the city model: a design process articulated around flexible proposals that can be adapted to urban dynamics and that take shape in smaller-scale areas, attending to the relation with innovative territorial infrastructures.

# DEMONSTRATION 01.

## NOTIONS

- Cultural identity
- Urban patterns

## HERITAGE TYPES

- Natural heritage
- Vernacular heritage

## DESIGN APPROACHES

- Multiscale design approach
- Environmental and responsive design
- Climate sensitive design

## DESIGN ACTIONS

- Consolidation
- Nature based solutions
- Developing cultural routes and itineraries

## TOOLS

- Morphogenesis study
- Collaborative cartography
- Mapping, Documenting. Cataloguing

## Student Group

Carmen Arranz Cob, Juan Manuel Martín Rincón, Antonio Sánchez Carmona

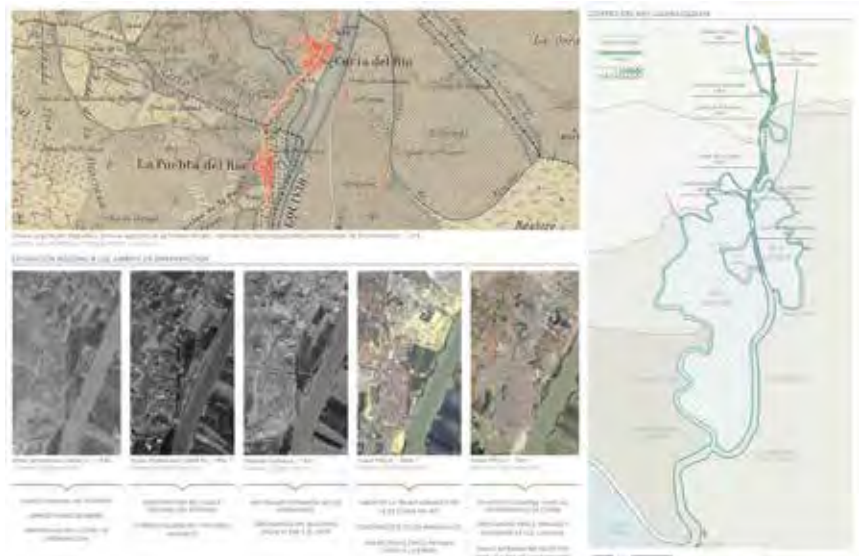
## Project Title

Three itineraries around memory.  
Reactivation of floodable land in La Puebla del Río (S villa)

## Project Description

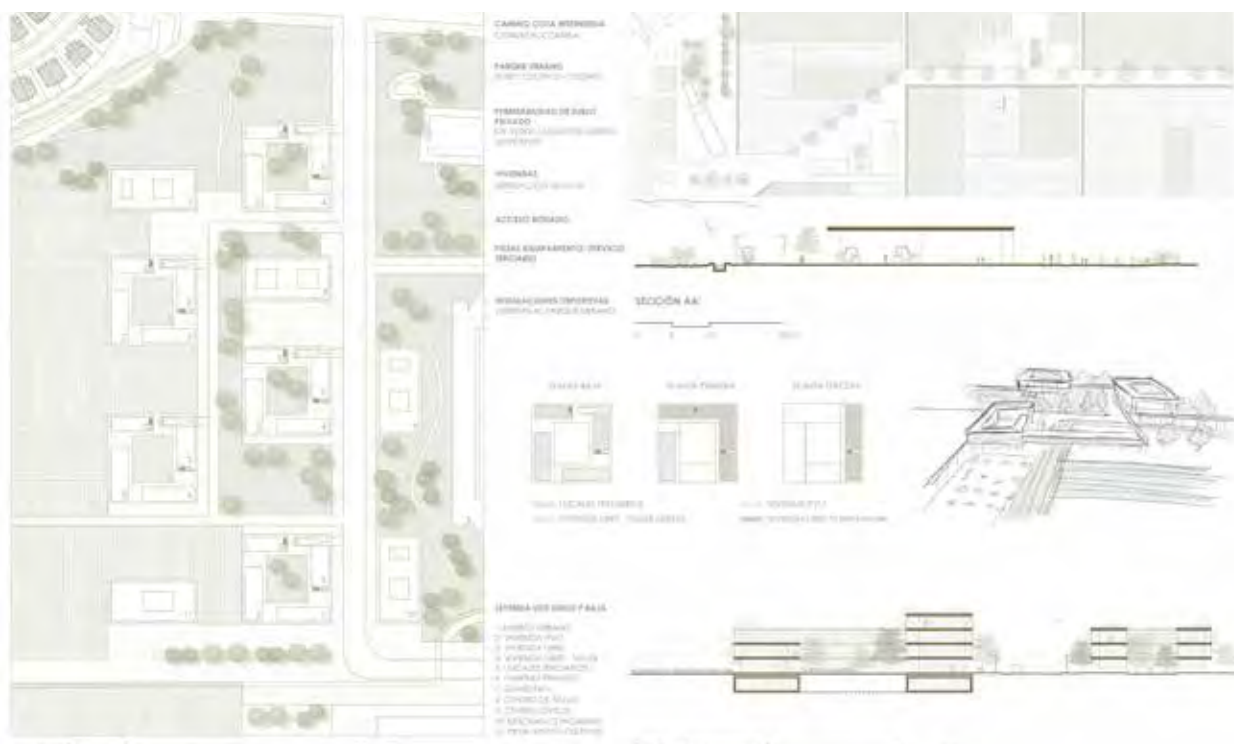
The project pretends to reactivate the floodable land located in L Puebla del Río creating an agricultural and residential area. The urban pattern developed is the result of a deep study of the site's cultural identity and natural heritage, remarkable for its natural environment and landscape values. It is based on three main project strategies, being the most important the definition of a cultural itinerary that would connect the different parts of the new urban pattern and the natural landscape, as it would act as an informative and expository passage to preserve the site historical memory around agriculture and land transformation. The project is, essentially, an environmentally and climate responsive solution based on memory and the site's identity with agriculture.

**Figure 01.**  
Historical and landscape research collage. Source: own elaboration





**Figure 01.** Sections of the proposal plans. New urban pattern. Source: own elaboration



**Figure 02.** Case study of the new urban border and the cultural itinerary. Housing as a connection between La Puebla del Río and Coria del Río. Source: own elaboration



Figure 03. Representation of the proposal plans. New urban pattern. Source: own elaboration



## DEMONSTRATION 01.

### NOTIONS

- Cultural and collective memory
- Cultural identity
- Urban patterns

### HERITAGE TYPES

- Natural heritage
- Vernacular heritage
- Tangible and intangible heritage

### DESIGN APPROACHES

- Multiscale design approach
- Historical Urban Landscape - HUL
- Green Blue infrastructure

### DESIGN ACTIONS

- Adaptive reuse
- Rehabilitation / refurbishment
- Developing cultural routes and itineraries

### TOOLS

- Use of GIS technology
- Mapping, documenting, cataloguing

### Student Group

Miguel Guerrero López-Palanco, Cristina Manuel de Céspedes García, Pedro Alberto Soto Cabrita, María Gabriela Vieira Maroun

### Project Title

Channelling realities

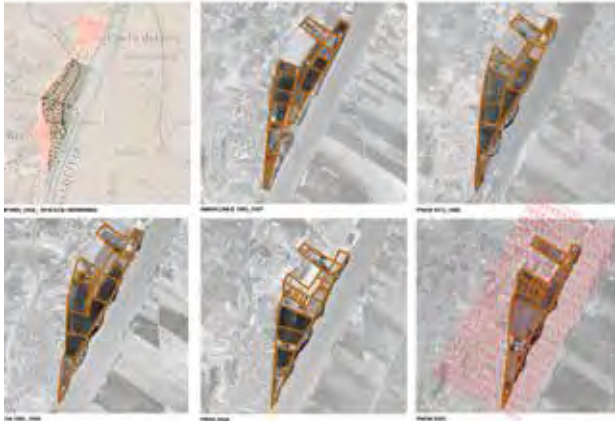
### Project Description

The project, located between Coria and La Puebla del Rio in Seville, proposes to recover the agricultural landscape and to give back both towns a meeting space, while linking to the Guadalquivir River. The intervention is aligned with the agricultural park concept to assume its flooding nature and recover their historical crops, creating new routes between them while retrieving the old "Río Pudio" stream that will irrigate the crops and serve to articulate the plan. Dealing with two different edges, firstly the sheer topography of La Puebla creating new vertical connections in relation with the river, and then including two stations of the innovative fluvia transport system "Metro-río", supporting both the cultural itinerary and the new housing hub with social equipments.

### Figure 01.

Research and ideation process. The slide shows the approach to the knowledge of the place and the identification of the action lines on the heritage. Including the importance of the Guadalquivir River, the rescue of the Pudio riverbed and the definition of the grid following the historical patterns of cultivation. Source: the authors.







**Figure 02.** Proposal plans. These images show the study zone on a general scale, where it's represented the proposed rehabilitation of a productive riverside landscape, the new areas of agricultural production and housing within the context of a new agricultural park, as well as the resolution of new vertical routes between the urban escarpment of La Puebla del Río and the lower level of the cultivate. Source: the authors.

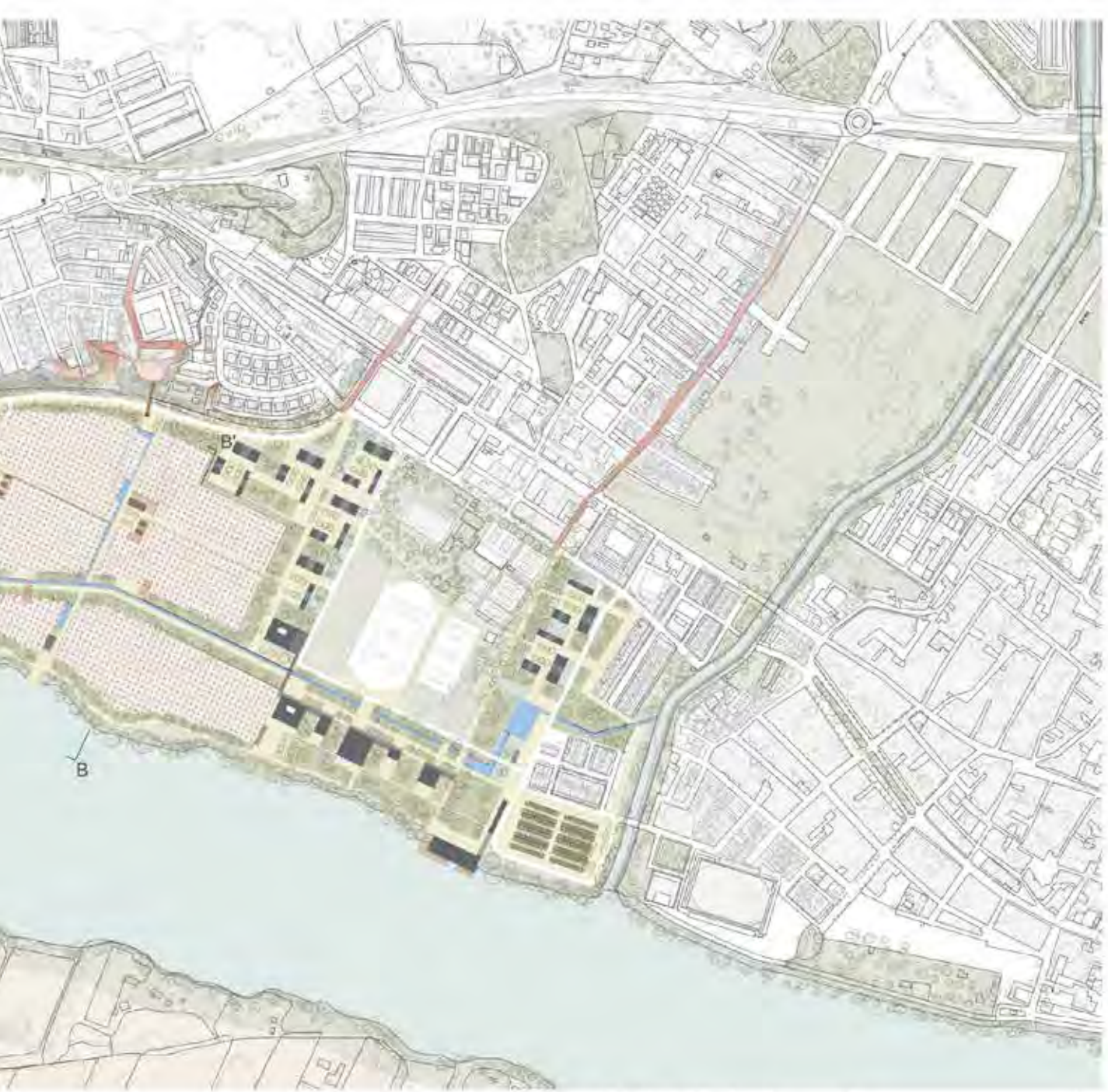
PLANTA GENERAL



SECCIÓN A-A'

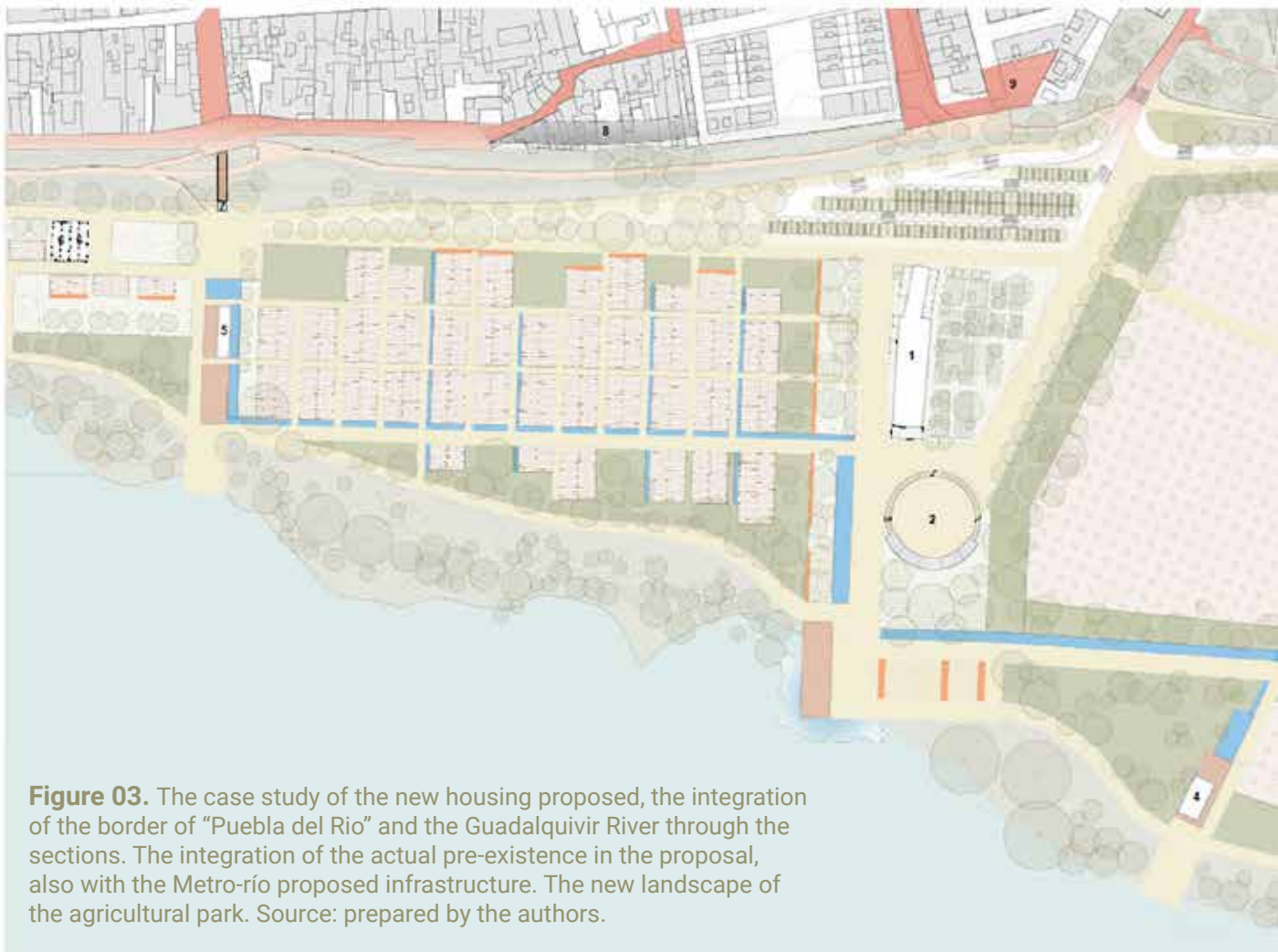


SECCIÓN B-B'



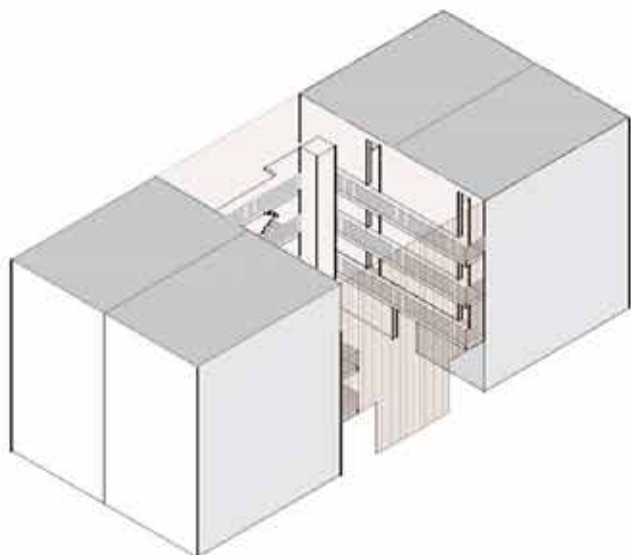
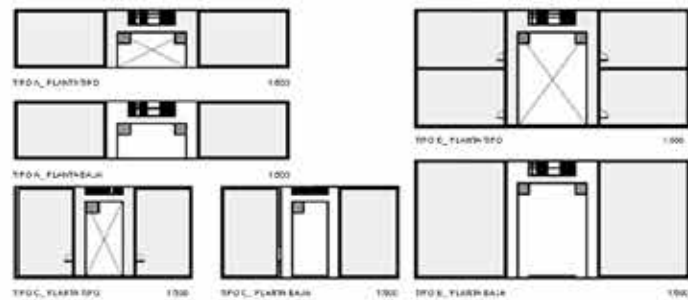
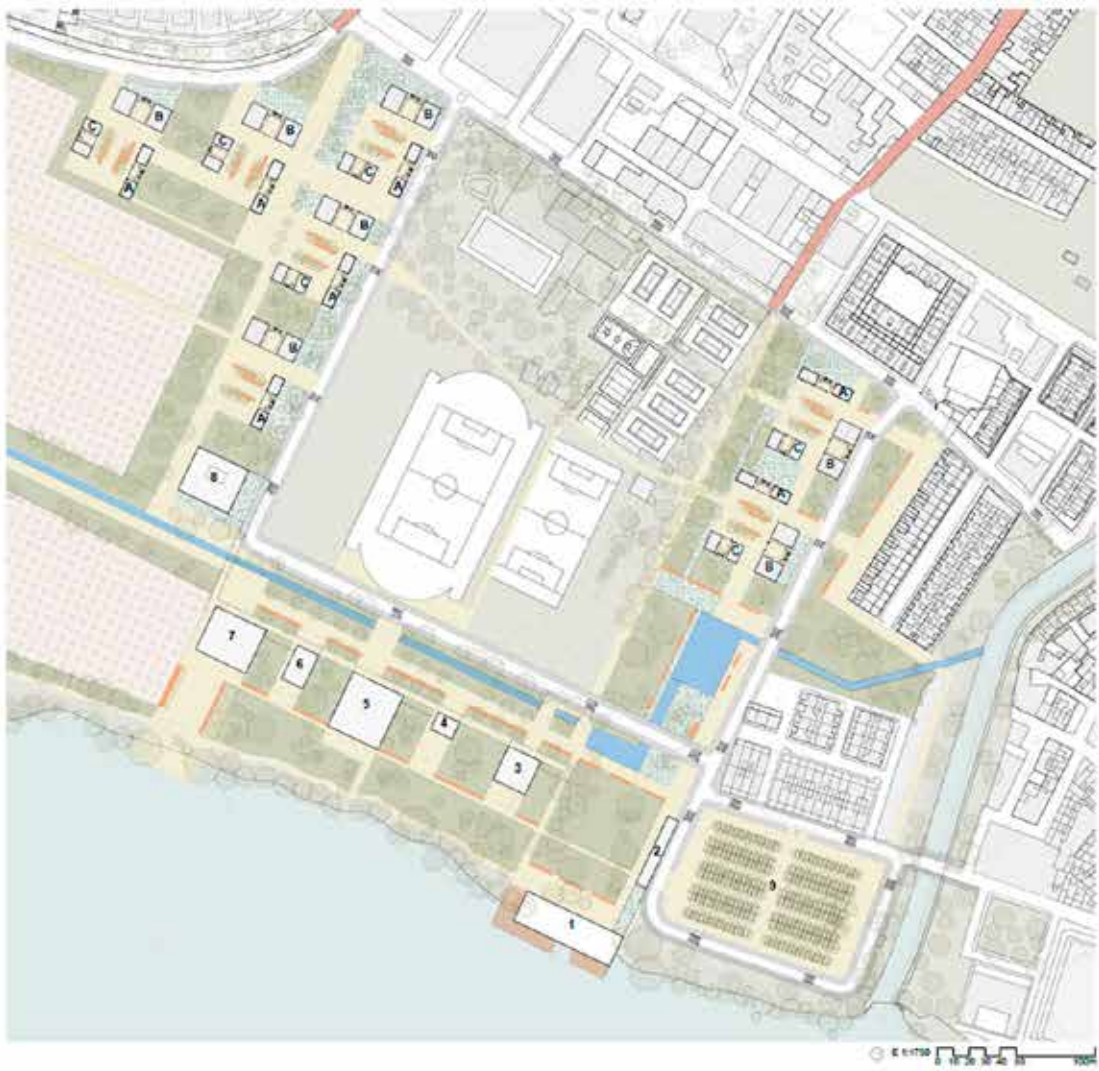
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**Figure 03.** The case study of the new housing proposed, the integration of the border of “Puebla del Río” and the Guadalquivir River through the sections. The integration of the actual pre-existence in the proposal, also with the Metro-río proposed infrastructure. The new landscape of the agricultural park. Source: prepared by the authors.







# SWOT ANALYSIS

SWOT analysis has been performed at the very beginning of HERSUS project activities as a part of Seminar on Teaching through Design for Sustainability of the Built Environment and Heritage Awareness. It aimed to reveal different professional expertise, methodologies and approaches between the partner organisations as well as to identify strengths, weakness, opportunities and threats in relation to issues of: a) Heritage and sustainability; b) Teaching activities and methodologies; c) Networks and employability. The analysis revealed the differences but also common issues related to partner organisations and national contexts that further helped in guiding the direction for development of IO5 and other HERSUS activities.



# S

## STRENGTHS

### CULTURAL HERITAGE / SUSTAINABILITY:

- The analysis of social/technological experimentations and architectural visions and their relation to the history of the environment, science and technology.
- Cultural Heritage as a pillar of architectural design.
- An environmental approach to building.
- The promotion of experimentation and critical thinking through a creative approach on multiple scales, .
- The city as a unique polygon for research - the dichotomy between historic monuments and modern buildings
- Focus on multiple scales of the built environment
- Existence of high level examples, combining heritage and sustainability
- Complex understanding of sustainable development (cultural, social, economic and environmental)

### TEACHING ACTIVITIES /METHODOLOGIES:

- Architectural restoration courses' educational track are formed through analysis, survey and diagnosis towards forming a rehabilitation/reuse project proposal.
- The study of concepts and ideas from the international community through international Charts and debates.
- Interdisciplinary approach.
- The use of technological tools for analysis in the educational process of sustainable heritage
- Application of both theoretical and practical principles and knowledge
- Development of critical and creative thinking
- Upgrading and integration of study programs
- Coherent and International teams of partners of architecture schools
- Balanced distribution of responsibilities and tasks
- Clear aims for teaching curricula development
- The existing knowledge on the schools of architecture, in the fields of heritage and sustainability
- Implementation of digital tools for environmental studies
- Practical approach to the restoration

### NETWORKS:

- The network with local communities, institutions and universities: real problems of conservation/ reuse/ transformation.
- The expert training of professionals from the public and private sector.
- Interdepartmental cooperation
- Interdisciplinary oriented studies
- Internationality
- Networking and cooperation among partners

### EMPLOYABILITY

- National Ministry of culture and education, the private sector.

# W

## WEAKNESSES

### CULTURAL HERITAGE / SUSTAINABILITY:

- A conservation based on the buildings user's comfort requirements.
- The revitalisation of the historical buildings relates to the improvement of environmental response.
- A shared strategic definition of Sustainability from a social, environmental, and economic perspective has to be clarified
- The partial lack of a clear institutional framework
- Limited approach to heritage from different scales (from monument to landscape)
- Scarce implication of emergent heritage

### TEACHING ACTIVITIES/METHODOLOGIES:

- The programmes and the courses evidence a fragmentation regarding Cultural Heritage and Sustainability issues.
- Locally-oriented researchers - Thessaloniki historic urban centre
- Courses provided mainly in Greek - Language barriers
- Lack of international cooperation
- Absence of other related disciplines within partner teams
- Different focus / perspective by each partner
- The non-existence of courses combining in practice the two topics

# O

## OPPORTUNITIES

### CULTURAL HERITAGE / SUSTAINABILITY:

- The analysis, observation and comprehension of historical, social and economic dynamics improve the project. This method considers past social and technological experimentations and recognises the tangible and intangible values of past architectural design choices and Urban planning visualisation.
- The ancient building reuse (passing by analysis, surveys and diagnostic), considered in the creative and revitalisation approach, allows students to experiment and develop critical thoughts.
- Understanding principles of holistic protection of buildings
- Understanding and recognizing environmental strategies incorporated in the local context
- Clear understanding within architectural discipline
- A clear focus on the combination of the two topics

### TEACHING ACTIVITIES /METHODOLOGIES:

- The idea of multicultural, multi-scalar and interdisciplinary approaches and a transversality method turns the designing of single things into identifying a method.
- The awareness of the frequently and quickly change of specific technological tools is essential. The Architects' education does not aim to train specialised technicians, but they have to know the method of analysis that can be applied even with different tools.
- Possibility of relation between the study program and the current local needs
- Acquiring conservation and restoration skills in a local context
- Broader view of educational issues and solutions
- Innovative coherent international curriculum
- Feedback from professional and institutional sectors
- Courses of great impact (12 ECTS) linked to sustainability

### NETWORKS:

- Starting from the dialogue with local and national institutions, students can understand the real, local problems and experiment with new design themes and improve with Cultural Heritage safeguard and protect methods.
- Networking with various stakeholders, experts and institutions
- Links generation between partner countries and long term collaborations beyond project completion

### EMPLOYABILITY

- International employability of graduates

# T

## THREATS

### CULTURAL HERITAGE / SUSTAINABILITY:

- A conservation based on the buildings user's comfort requirements.
- The revitalisation of the historical buildings relates to the improvement of environmental response.
- A shared strategic definition of Sustainability from a social, environmental, and economic perspective has to be clarified
- The partial lack of a clear institutional framework
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- Lack of international cooperation
- Absence of other related disciplines within partner teams
- Different focus / perspective by each partner
- The non-existence of courses combining in practice the two topics

## STRENGTHS

### CULTURAL HERITAGE / SUSTAINABILITY:

- The theoretical and practical approach concerning the integration of tangible and intangible heritage.
- The acknowledgement of the evolution of the concept of heritage.
- A sustainable approach towards the historical building, city and territory based on preventive praxis, history and legacy.
- A sustainable approach to the development of historic city and territory. Its dialogue with the predominant theoretical and intervention trends.
- The idea of reuse as a strategy to reduce territory consumption.
- Emphasis on achieving cultural sustainability through heritage management
- Wide and updated definition of heritage: coverage of multitude of issues

### TEACHING ACTIVITIES /METHODOLOGIES:

- Lectures, critic reviews, public presentations, special seminars and workshops, theoretical courses, practical projects with critic reviews and public presentations.
- Active learning methodologies: BPL, Service Learning, Inclusive Learning.
- International students.
- Multi-scalar, theoretical and practical approach, creativity as a resource to display the architectural and urban design in a methodological process.
- The study of the international charters and the debate on conservation, heritage and Sustainability.
- Sharing method and process discussion with former students.
- Integral design process, emphasis on creative approach in theoretical and research works
- Learning based on the relation of theory & practice
- Application of a multitude of research media and sources
- Transmission of methodical process to students
- Practical approach to heritage intervention
- Implementation of digital tools on heritage and sustainable development
- Update studies supported on the most recent international charters

### NETWORKS:

- The collaboration with local institutions, such as Municipalities, and national institutions technicians from the Cultural Administration such as the Andalusian Institute of Historical Heritage and the Patronato de la Alhambra y el Generalife;
- Collaboration with relevant public institutions
- Interdisciplinary approach
- Transdisciplinary methodology incorporated into courses

### EMPLOYABILITY

- The formative offer responds to real situations on Andalusian Heritage

## WEAKNESSES

### CULTURAL HERITAGE / SUSTAINABILITY:

- Sustainability is mostly associate with energetical qualifications
- Intervention on Cultural Heritage is not only protection but architectural design.
- Limited reflexion about socio-cultural sustainable development
- Absence of accorded understanding of multiple ideas of sustainability
- Lack of a conceptual framework linked to the multiple definitions of heritage
- Scarce implication of rural zones and less populated cities
- Limited reflexion a ound emergent heritage

### TEACHING ACTIVITIES/METHODOLOGIES:

- Limited availability of theoretical and technical basis for research activities

### NETWORKS:

- The public administration resistance to social participation.
- The Cultural Heritage intervention is mostly considered Monuments preservation rather than, for example, industrial heritage enhancement or run-down cultural neighbourhood values preserving.

# O

## OPPORTUNITIES

### CULTURAL HERITAGE / SUSTAINABILITY:

- Cultural Heritage is a current resource that contributes to local cultural, social and economic development responds to the awareness of responsibility to pass them to future generations.
- The ancient building reuse, considered in the creative and revitalisation approach, reaches the European strategy of reducing territory consumption.
- Creative approach to heritage regeneration
- Achieve a complex understanding of heritage like a live concept

### TEACHING ACTIVITIES /METHODOLOGIES:

- The idea of a multicultural, multi-scalar and interdisciplinary approach guarantees to turn the designing approach into designing process.
- The use of active learning methodologies (BPL, Service Learning, Inclusive Learning) introduces new aspects in teaching methodologies in the contents and approaches. The new learning methodologies are extremely challenging and involve the tools and the forms to express architectural problems.
- Vast field of research and theoretical discussion themes
- Heritage and sustainability like a transversal idea across the degree
- Development of specific heritage-sustainability courses specially linked to the specialization post-graduate studies

### NETWORKS:

- Starting from the dialogue with local and national institutions, students can approach the real, local problems and can find through the didactic experimentation new ideas to identify design themes and improve Cultural Heritage safeguard and protect methods.
- Possibility to involve different stakeholders in the research activities
- Possibility of cooperation between different study degrees and courses
- Possibility of international cooperation
- Feedback and implication of professional and institutional sectors
- The training of future professionals and experts (for the public and private sector) responding to real Andalusian Heritage needs is the expression of a deep connection between the universities and the professional scene.

# T

## THREATS

### CULTURAL HERITAGE / SUSTAINABILITY:

- Low consideration of other types of heritage with less impact or acknowledgement
- Oversimplify the reflexion and approach to heritage due to tourism influence
- Loss of general and wide vision about heritage triggered to extreme specialization

### TEACHING ACTIVITIES/METHODOLOGIES:

- Lack of general awareness of heritage due to concentration of heritage courses in the post-graduate courses

### NETWORKS:

- The complexity for public administration involvement within social participation processes makes difficult the link between university research and communities' public engagement actions.
- Difficulty of constant feedback from public bodies in order to maintain relevance

## S

### STRENGTHS

#### CULTURAL HERITAGE / SUSTAINABILITY:

- The awareness of the evolution of values of Cultural Heritage.
- The acknowledgement of the changes of conservation and restoration tools, techniques and theories.
- The identification of Sustainability issues as part of a creative and cultural design process based on analysis and research activities about historical, cultural and social aspects, rather than a technical approach.
- The observation, analysis and comprehension of historical and cultural background as a base of Architectural restoration and Urban regeneration.
- The idea of reuse of ancient buildings as a strategy to reduce territory consumption.
- The Cultural Heritage as a source of inspiration and architectural design experimentation and a technical aspect concerning restoration and rehabilitation.
- The critical and creative approach towards the existing reality
- Pervasion of heritage and sustainability
- Emphasis on restoration and regeneration
- Rich local heritage as an appropriate reference place for research
- Importance of social implication to keep heritage alive

#### TEACHING ACTIVITIES /METHODOLOGIES:

- Lectures, critic reviews, public reviews, seminars and workshops, theoretical courses, practical projects with critical reviews, and public presentations.
- International students and teachers.
- The study of the international charters and debate on conservation, Cultural Heritage and Sustainability.
- Multi-scalar and interdisciplinary approaches, theoretical and practical paths.
- The fundamental role of knowledge in the educational path.
- Commitment to interdisciplinarity
- Nurturing critical thought through discussion
- Stratified cognitive process in the system of design research
- Unitary educational path from a unique department

#### NETWORKS:

- The collaboration with local institutions, such as Municipalities, and national institutions, such as Superintendence, aiming to focus on applied case-studies.
- Nurturing links with local and national institutions

#### EMPLOYABILITY

- The former IUAV students are employed in the public sector and the private sector.

## W

### WEAKNESSES

#### CULTURAL HERITAGE / SUSTAINABILITY:

- A shared strategic definition of Sustainability from a social, environmental, and economic perspective has to be clarified
- Multiple ideas of sustainability
- Potential translation losses or misunderstandings
- Absence of accorded understanding of multiple ideas of sustainability
- Lack of a conceptual framework linked to the multiple definitions of heritage

#### TEACHING ACTIVITIES/METHODOLOGIES:

- The programmes and the courses evidence a fragmentation regarding Cultural Heritage and Sustainability issues.

# O

## OPPORTUNITIES

### CULTURAL HERITAGE / SUSTAINABILITY:

- The idea of ancient buildings and Cultural Heritage as a source for the future is a sustainable approach toward soil exploitation, but it also responds to the awareness of responsibility to pass them to future generations.
- The awareness of the frequently and quickly change of specific technological tools is essential. The Architects' education does not aim to train specialised technicians, but they have to know the method of analysis that can be applied even with different tools.
- Theoretical background incorporation into projects
- Heritage as planning reference

### TEACHING ACTIVITIES /METHODOLOGIES:

- The study of international Charters and debate, the built projects discussion, and the design ideas critic reviews help students develop a critical approach and autonomous thought.
- The idea of a multicultural, multi-scalar and interdisciplinary approach turns the teaching into the transmission of "knowledge systems". It converts the design of the architectural object into a designing process.
- The education track roots on a creative/cultural approach and based on the scientific, theoretical and technological tools, and it aims to acquire competency rather than competences.
- The possibility of application and adapting the methodology based on local examples
- Conform an agreed heritage-sustainability approach from the school / department

### NETWORKS:

- Starting from the dialogue with local and national institutions, students can approach the real, local problems and find through the didactic experimentation new ideas to identify design themes and improve Cultural Heritage safeguard and protect methods.
- Expert and international networks communication
- Multicultural bridges to link Venice with the world
- Venice like an example and connection point of heritage for students

### EMPLOYABILITY

- The training of future professionals and experts (for the public and private sectors) is deeply related to the professional scene. Seminar with experts or internship are essential to give students a better understanding of the Cultural Heritage and Sustainability problems.

# T

## THREATS

### CULTURAL HERITAGE / SUSTAINABILITY:

- A shared strategic definition of Sustainability from a social, environmental, and economic perspective has to be clarified
- New ideas of reuse in contemporary conditions
- Tourism influence on the reflexion and approach to heritage

### TEACHING ACTIVITIES/METHODOLOGIES:

- The interaction between sustainability and cultural heritage issues in architecture's learning path is essential to transmit Heritage tangible and intangible values preservation and enhancing.
- The challenge is to clarify a shared definition of Cultural Heritage and Sustainability from a social, environmental and economic perspective.
- Loss of implication in socio-cultural sustainable development due to the importance give to environmental sustainability from different institution and regulation.
- The Architects' education aims to teach the methods of analysis that can be applied even with different tools. The challenge is to improve architectural learning as a process aimed to acquire competency rather than competences
- One of the risks associated with Cultural Heritage's rehabilitation is the rapid ageing of comfort standards and design techniques. They change faster than the cultural values of the Heritage they preserve over time



# S

## STRENGTHS

### CULTURAL HERITAGE / SUSTAINABILITY:

- Understanding tradition as a cultural, social and economic value and considering its promotion through the temporal and spatial dimension.
- The research on local knowledge, skills and techniques (low cost, low tech, DIY solutions, local materials).
- The observation, analysis and comprehension of historical and cultural background based on Cultural Heritage intervention.
- Creative, critical and practical approach
- Engaging wide range of topics, contexts and tools
- Focus on multiple scales of the built environment
- Implication of rural zones in the reflexion about heritage

### TEACHING ACTIVITIES /METHODOLOGIES:

- The experimentation of collaborative practice-oriented methodologies for original context design, social innovation and the cultural transformations transmission.
- The interdisciplinarity research through the overview of relevant concepts and ideas linked with sociology and anthropology.
- Connecting theoretical and practical work - sharing of knowledge and practice
- Encouragement of interdisciplinarity
- Social involvement of students and projects
- Approach from different field

### NETWORKS:

- Dialogue with Local and National Institutions.
- Civic and academic initiatives for sustainable development.
- Educating engaged and socially and environmentally responsible architects
- Collaborative process with local inhabitants

### EMPLOYABILITY

- Professional figures employed in the public sector, such as the National Ministry of culture and education, and the private sector.

# W

## WEAKNESSES

### CULTURAL HERITAGE / SUSTAINABILITY:

- Sustainability issues consider the scientific aspects, such as energy control, monitoring, and environmental policy.
- Energy rehabilitation involves structural changes affecting the buildings' volumetric, material, technological, and organizational aspects.
- The emphasis on the contemporary relationship to heritage excludes traditional methods of conservation and preservation

### TEACHING ACTIVITIES/METHODOLOGIES:

- The programmes and the courses evidence a fragmentation regarding Cultural Heritage and Sustainability issues.
- Locally-oriented researches
- Courses provided mainly in Serbian
- Low intricacy of heritage concept
- Limited Interdisciplinary approach

# O

## OPPORTUNITIES

### CULTURAL HERITAGE / SUSTAINABILITY:

- The historical, social and economic dynamics observation and comprehension give students the awareness of the link between the Cultural Heritage definition o tangible and intangible values.
- The researches on local knowledge, skills and techniques permit the development of low cost, low tech, DIY solutions in line with the traditions and the Cultural Heritage values. (The local knowledge, skills and techniques are part of Cultural Heritage themselves.)
- Understanding and recognizing environmental strategies incorporated in the local context
- Improving performance for dealing with the current and future challenges
- Implication of institution in the development of project focus on a less populated areas

### TEACHING ACTIVITIES /METHODOLOGIES:

- The experimentation of collaborative practice-oriented methodologies in collaborative (social) projects is a method that permits sharing historical and cultural transformations and implements them with new contemporary cultural values.
- The interdisciplinary approach prepares professional figures employed in the public sector and the private sector with new Cultural Heritage awareness and sociological and anthropological sensibility.
- Elective modules on study programs providing students opportunities to individually mold their education
- Sustainability like educational stream across degree

### NETWORKS:

- Starting from the dialogue with local and national institutions, students can approach the real, local problems, and they can find through the didactic experimentation new ideas to identify design themes and improve Cultural Heritage safeguard and protect methods.
- Networking with various stakeholders, experts and institutions
- Defining design processes and projects of implementation regarding the current local needs
- Understanding the local needs permits the individuation of the public properties with no functions and abandonment status. These buildings are an opportunity for an experimental new approach toward Cultural Heritage and collaborative design activities.

# T

## THREATS

### CULTURAL HERITAGE / SUSTAINABILITY:

- Lack of reference to sustainable heritage in the earlier stages of education
- Specialization in particular fields could cause the loss of a general perspective on heritage
- One of the risks associated with Cultural Heritage's rehabilitation is the rapid ageing of comfort standards and design techniques. They change faster than the cultural values of the Heritage they preserve over time.

### TEACHING ACTIVITIES/METHODOLOGIES:

- The interaction between scientific and Cultural issues in architecture's learning path is essential to transmit Heritage tangible and intangible values preservation and enhancing.
- The Architects' education aims to teach the methods of analysis that can be applied even with different tools. The challenge is to improve architectural learning as a process aimed to acquire competency rather than competences

## STRENGTHS

### CULTURAL HERITAGE / SUSTAINABILITY:

- The Cultural Heritage detailed investigation (teaching, labs etc), is based on the observation, analysis and comprehension of historical, architectural and cultural background as well as sustainable and environmental parameters following a multidisciplinary approach.
- The analysis of existing heritage buildings of different periods (historic, vernacular, of the modern movement) and urban conditions in order to identify urban design dynamics and approaches.
- The combination of social, technological and architectural data with historical, cultural and environmental analysis involving all aspects of sustainability.
- The detailed study of the environmental approach of a building (architectural characteristics) in combination with the investigation of its urban environment (urban scale).

### TEACHING ACTIVITIES /METHODOLOGIES:

- Incorporation of different scale projects as case studies in various courses following a critical approach and thinking.
- Incorporation of real case studies as students' projects, addressing real problems, and thus allowing for in-depth, multi-faceted explorations of complex issues regarding field conditions, cultural heritage policies and legislation.
- Involvement of faculty, adjunct and visiting faculty members, practitioners, professionals in the field and industry experts in the teaching process.
- Analysis and detailed critical study of the international charters (old and recent) and debates on conservation, heritage and sustainability by teachers and state officers dealing with heritage and sustainability.
- Technical and theoretical knowledge-based courses
- Research-based courses helping the development of research skills and methods
- Incorporation of digital tools and cutting-edge technology equipment in the documentation and environmental monitoring of historic buildings.
- Combination of digital with traditional tools in the documentation of historic buildings
- Combination of the architectural with the environmental documentation of historic buildings leading to a holistic overview of all aspects of the buildings under investigation
- Close cooperation between students of different disciplines (technological background, architectural, social) in the graduate courses of conservation and energy
- Emphasis on a critical approach to study, investigate and research
- Acquiring new skills (theoretical and practical) and their immediate implementation in complex tasks
- The ability to focus knowledge on specific aspect (architectural, social, environmental)
- Implementation of new technologies tools for recording and analysing heritage (3d scanners, drones etc)
- Update studies supported on the most recent international charters
- Collaboration of three different department from two different faculties in the conservation programme
- Provision of scholarships to excellent master students of the conservation programme
- Attracting substantial internal and external competitive research funding from UCY and European Union in topics related to the conservation programme
- Several well-equipped teaching and research laboratories

## WEAKNESSES

### CULTURAL HERITAGE / SUSTAINABILITY:

- The study of sustainability is often linked to scientific aspects, such as energy control, monitoring, and environmental policy, following a more technical approach and less a theoretical.
- Often there is a limited interconnection between heritage and sustainability.
- The energy retrofitting of buildings of architectural heritage is often considered a threat to their architectural character and aesthetic values

### TEACHING ACTIVITIES/METHODOLOGIES:

- Limited interaction between the graduate courses on Conservation and Restoration of Historic Buildings and Sites and Energy Technologies and Sustainable aspects
- Limited involvement in teaching of financial aspects of heritage.
- Insufficient public visibility of projects
- Teaching in Greek can be considered a limitation

### NETWORKS:

- There are no links with ESCOs and no energy retrofit projects of heritage buildings through the process of Energy Contracting in Cyprus, yet.
- Insufficient cooperation with public bodies and relevant institutions and stakeholders
- Limited support for editions regarding the outcomes of students' projects

### NETWORKS:

- Interdisciplinary nature of graduate courses. Collaboration between university departments and different schools (Architecture, Civil Engineering and Archaeology) and their specialisation fields
- Collaboration between the university and local communities and institutions. Collaboration with various stakeholders involving the delivery of their archival material, an important tool for the effective decision making.
- Collaboration between the university and governmental bodies such as Department of Antiquities, Conservation Sector of the Department of Town Planning and Housing, Energy Office etc
- Participation in other European – Research programs in the framework of heritage and sustainability. The training program for a new professional qualification "Building Rehabilitation Expert", aims to create online training courses (MOOC) and a search tool for accessing technological and innovative rehabilitation interventions.
- Development of digital platforms with various information about heritage in local level (VernArch.ac.cy) and in international level (Smart Rehabilitation platform for technological innovations and for case study buildings, hersus platform)
- Interdisciplinary approach both in teaching and in student work
- Professional connection and projection of students

# O

## OPPORTUNITIES

### CULTURAL HERITAGE / SUSTAINABILITY:

- The analysis, observation and comprehension of historical, social and economic dynamics of cultural heritage (in a multi-scalar approach) can raise awareness on heritage values (tangible and intangible).
- The recent update of the legislation regarding energy requirements include historic buildings. This marks a shift in the local policies that can form the basis for expanding the discussion on sustainability and heritage, and also gaining access to finance (ESCOs market).

### TEACHING ACTIVITIES /METHODOLOGIES:

- The Cultural Heritage conservation and rehabilitation contribute to local cultural, social and economic development and responds to the awareness of responsibility to pass them to future generations.
- Further implementation and familiarisation with technological and digital tools and innovative rehabilitation methods will help to bridge the gap between practice, research and teaching.
- The use of active learning methodologies (BPL, Service Learning, Inclusive Learning) introduces new aspects in teaching methodologies. The new learning methodologies are extremely challenging and involve the tools and the forms to express architectural problems.
- Recent development of on-line courses (MOOCS) on heritage and sustainability (environmental aspects of vernacular architecture, restoration and conservation of historic structures) hosted in the university platform of the Technological University of Catalonia.
- Extensive theoretical and technical grounding of courses outcomes as a good basis for public presentation and implementation possibilities
- Developing a variety of design research tools
- Transfer the interdisciplinary work developed in the master to bachelor and diploma courses
- Development of specific heritage-sustainability courses linked to the specialization post-graduate studies

### NETWORKS:

- Promote cooperation and interaction through participatory design. The elaboration of partnerships between school, science and society is imperative and can be further enhanced. Collective reflection is key for identifying shared principles across different cultural contexts.
- Strengthen the collaboration with national and international authorities in order to have access to less accessible listed buildings and monuments and governmental archives, which are otherwise not easily accessible to the general public.

# T

## THREATS

### CULTURAL HERITAGE / SUSTAINABILITY:

- One of the risks associated with the level of awareness on cultural heritage's value is the ageing of the buildings and the abandonment of historic clusters (migration and urbanisation) that leads to overall depreciation of cultural heritage values.
- Large number of abandoned rural settlements and structures due to the lack of public awareness and financial governmental support or sufficient initiatives.
- Lack of incentives for sustainable revitalisation of historic settlements and buildings.
- On the building scale, incentives focus mainly in restoration actions, rather than energy retrofit interventions.
- Immature market on compatible materials for conservation purposes and especially for the energy retrofitting of buildings and sites.
- Limited job openings related to conservation
- Non-institutionalization of the conservation sector as a separate branch of the Cyprus Chamber of Engineers.

### TEACHING ACTIVITIES/METHODOLOGIES:

- The programmes and the courses evidence a fragmentation regarding Cultural Heritage and Sustainability issues.
- Lack of cooperation with different stakeholders: complex projects remain only on theoretical level
- Graduate students sometimes with a lack of awareness on emergent heritage
- Difficulty in the realization of students' projects in real case studies
- Budget constraints and support and limited funding

# CONCLUSION REMARKS

Architectural education at the master's level is a valuable critical tool for learning about the real place-based problems of the city and society in which we live. The results of IO1 and IO2 indicated that the field of architecture, independently, cannot penetrate different layers of spatial complexities that surround us. IO3 helped us to broaden our horizons and understand complex boundaries, multiple contents and inconsistent narratives of the phenomenon we encountered. At the same time, IO4 enabled us to see this multi-layeredness in various forms and shapes, referring to it and returning to it repeatedly.

The "Book of Courses" provides a synthesis of content, pedagogical methods, guidelines, and a structure of an imaginative curriculum for teaching within the partner organisations in the relevant fields based on architecture. It is founded on results from IO1, IO2, and IO3 and based on gathered experiences from LTT1, LTT2, and LTT3. Relying on previous outcomes of the project, as well as on the logic of the Bologna principles of the structure of the master's programme in the field of architecture, IO5 clearly, in critical collaboration and leaning on educational capacities of partner institutions, distinguishes three conclusions.

The first conclusion refers to the thematic scope of sustainability and heritage, which was elaborated and critically considered through several discussions conducted inside expert groups and among them, mainly in the conceptual phase of curriculum structure formulation. A good measure of establishing a gradual complexity line was found starting from basic principles of protection and treatment of cultural heritage and the multiscale nature of heritage, through the examination of the critical framework of contested heritage, up to the strategic reflection on the multidisciplinary framework of future cities and its sustainability. This approach enabled a different way of looking at the entire master's curriculum in which the topics, learning methods and techniques, were

developed through complexity rather than typology and contextual appropriateness. The usual attitude towards education in the field of architectural design, seen through the typological and contextual frame of the built, was avoided and replaced with the one linking thematic, scalar and disciplinary variety. The base developed through IO1 and IO2 also contributed to this, which showed all the complexity of the topic we are dealing with and the potential of its interpretativeness, which became both a limitation and an advantage.

The second conclusion refers to the relationship between the structure and applied methods in terms of developing a design studio module as the core part of any study programme in the field of architecture. Design studio as a format was seen as a platform and a pool of choices complementing various and different teaching tools and learning methods, from workshops and seminars to various analytical research formats. This fact changed the course of the interpretative potential of the design studio content and structure, making opportunities for new and adaptable variations ready to accommodate different themes, scales, contexts and border disciplines. From the proposed design studio modules, a wide range of problems arose, tackling contemporary place-based and research-based problems.

The third important conclusion is two-folded. On one side, specialisations indicate a wide range of techniques and tools needed to be developed to support thinking and designing in a given field. On the other, through the hybrid format of the workshop, it was clear that the importance of including an international framework and peer exchange of knowledge from different contexts is needed. They also indicated various possibilities of positioning short and intensive programmes within the structure of the classical curriculum, as well as the potential of extracurricular activities for students and teachers, but also for third parties such as private and public sectors and





# ANNEX

## ANNEX 1

### LEARNING OUTCOMES

Learning outcomes are an important element for quality assurance in the process of curricula design and development. In this research, the analysis of learning outcomes follows 11 general criteria, each with 3 sub-criteria, defined by the Royal Institute of British Architects (RIBA) and used for qualification description and programme validation [1]. Acknowledgement of the relevance of RIBA criteria is confirmed by the Education Commission of UIA (International Union of Architects) by applying them in UNESCO-UIA Study Program Validation, which aims to set an international standard for excellence in architectural education [2].

[1]. Royal Institute of British Architects (RIBA). *RIBA Procedures for Validation and Validation Criteria for UK and International Courses and Examinations in Architecture*; RIBA Education Department: London, UK, 2011; Available online: <https://riba-prd-assets.azureedge.net/-/media/Files/2011ValidationProcedures-SECONDREREVISION/2MAY2014pdf?rev=018873e53517439ea932050c892290d6&hash=EE8681B04226524768C850A98E1D9A52> (accessed on 13 February 2022).

[2]. UNESCO-UIA Validation Council for Architectural Education. *UNESCO-UIA Validation System Procedures Manual for Study Programmes and Systems*; International Union of Architects: Paris, France, 2017; Available online: [https://www.uia-architectes.org/wp-content/uploads/2022/02/UNESCO-UIA-Validation-System-Manual\\_2017\\_english.pdf](https://www.uia-architectes.org/wp-content/uploads/2022/02/UNESCO-UIA-Validation-System-Manual_2017_english.pdf) (accessed on 13 February 2022).

### LEARNING OUTCOMES

#### 1 Ability to create architectural designs that satisfy both aesthetic and technical requirements. The student could have the ability to:

- prepare and present building design projects of diverse scale, complexity, and type in a variety of contexts, using a range of media, and in response to a brief;
- understand the constructional and structural systems, the environmental strategies and the regulatory requirements that apply to the design and construction of a comprehensive design project;
- develop a conceptual and critical approach to architectural design that integrates and satisfies the aesthetic aspects of a building and the technical requirements of its construction and the needs of the user.

#### 2 Adequate knowledge of the histories and theories of architecture and the related arts, technologies and human sciences. The student will have knowledge of:

- the cultural, social and intellectual histories, theories and technologies that influence the design of buildings;
- the influence of history and theory on the spatial, social, and technological aspects of architecture
- the application of appropriate theoretical concepts to studio design projects, demonstrating a reflective and critical approach.

#### 3 Knowledge of the fine arts as an influence on the quality of architectural design. The student will have knowledge of:

- how the theories, practices and technologies of the arts influence architectural design;
- the creative application of the fine arts and their relevance and impact on architecture;
- the creative application of such work to studio design projects, in terms of their conceptualisation and representation.

#### 4 Adequate knowledge of urban design, planning and the skills involved in the planning process. The student will have knowledge of:

- theories of urban design and the planning of communities;
- the influence of the design and development of cities, past and present on the contemporary built environment;
- current planning policy and development control legislation, including social, environmental and economic aspects, and the relevance of these to design development.

**5 Understanding of the relationship between people and buildings, and between buildings and their environment, and the need to relate buildings and the spaces between them to human needs and scale. The student will have an understanding of:**

- the needs and aspirations of building users;
- the impact of buildings on the environment, and the precepts of sustainable design;
- the way in which buildings fit into their local context.

**6 Understanding of the profession of architecture and the role of the architect in society, in particular in preparing briefs that take account of social factors. The student will have an understanding of:**

- the nature of professionalism and the duties and responsibilities of architects to clients, building users, constructors, co-professionals and the wider society;
- the role of the architect within the design team and construction industry, recognising the importance of current methods and trends in the construction of the built environment;
- the potential impact of building projects on existing and proposed communities.

**7 Understanding of the methods of investigation and preparation of the brief for a design project. The student will have an understanding of:**

- the need to critically review precedents relevant to the function, organisation and technological strategy of design proposals;
- the need to appraise and prepare building briefs of diverse scales and types, to define client and user requirements and their appropriateness to site and context;
- the contributions of architects and co-professionals to the formulation of the brief, and the methods of investigation used in its preparation.

**8 Understanding of the structural design, constructional and engineering problems associated with building design. The student will have an understanding of:**

- the investigation, critical appraisal and selection of alternative structural, constructional and material systems relevant to architectural design;
- strategies for building construction, and ability to integrate knowledge of structural principles and construction techniques;
- the physical properties and characteristics of building materials, components and systems, and the environmental impact of specification choices.

**9 Adequate knowledge of physical problems and technologies and the function of buildings so as to provide them with internal conditions of comfort and protection against the climate. The student will have knowledge of:**

- principles associated with designing optimum visual, thermal and acoustic environments;
- systems for environmental comfort realised within relevant precepts of sustainable design;
- strategies for building services, and ability to integrate these in a design project.

**10 The necessary design skills to meet building users' requirements within the constraints posed by cost factors and building regulations. The student will have the skills to:**

- critically examine the financial factors implied in varying building types, constructional systems, and specification
- understand the cost control mechanisms which operate during the development of a project;
- prepare designs that will meet building users' requirements and comply with legislation, appropriate performance standards and health and safety requirements.

**11 Adequate knowledge of the industries, organisations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning. The student will have knowledge of:**

- the fundamental legal, professional and statutory responsibilities of the architect, and the organisations, regulations and procedures involved in the negotiation and approval of architectural designs, including land law, development control, building regulations and health and safety legislation;
- the professional inter-relationships of individuals and organisations involved in procuring and delivering architectural projects, and how these are defined through contractual and organisational structures;
- the basic management theories and business principles related to running both an architects' practice and architectural projects, recognising current and emerging trends in the construction industry.



