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O1 INTELLECTUAL OUTPUT  
Output type: Studies / analysis –  
Best practice guidelines / report

# REVIEW



## BEST PRACTICES

In Educating Sustainability  
and Heritage

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



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## REVIEW: Best Practices In Educating Sustainability and Heritage

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# Content

<b>Introduction</b>	<b>7</b>
<b>Editors perspective</b>	<b>8</b>
<b>Built Architectural and Urban projects</b>	<b>13</b>
<b>SERBIA-UBFA</b>	<b>14</b>
	PROJECTS
	<a href="#">Nebojša Tower, Kalemegdan Fortress</a> 14
	<a href="#">Senjski Rudnik</a> 24
	<a href="#">Office building BULEVAR 79</a> 32
	<a href="#">DR Plan for The Old Core of Zemun</a> 40
<b>ITALY-IUAV</b>	<b>50</b>
	PROJECTS
	<a href="#">Punta della Dogana</a> 50
	<a href="#">H-FARM and H-CAMPUS</a> 58
	<a href="#">Ex-Panificio Santa Marta Area</a> 64
	<a href="#">Venzone (UD)</a> 72
<b>CYPRUS-UCY</b>	<b>80</b>
	PROJECTS
	<a href="#">Urban landscape rehabilitation in Lefkara</a> 80
	<a href="#">HYBUILD Multifunctional center</a> 86
	<a href="#">Alexandrou Demetriou Tower</a> 92
	<a href="#">Vernacular dwelling in Kapedes</a> 100
<b>GREECE-AUTH</b>	<b>106</b>
	PROJECTS
	<a href="#">Area of Hrimatistiriou Square</a> 106
	<a href="#">Kleious 24</a> 114
	<a href="#">Building block defined by Adrianou,</a> 122
	<a href="#">Vrissakiou, Kladou and Areos streets</a>
	<a href="#">Historic barracks in the Pavlos Melas metropolitan park</a> 130
<b>SPAIN-USE</b>	<b>138</b>
	PROJECTS
	<a href="#">Casa Diáñez</a> 138
	<a href="#">Cerro de San Miguel</a> 146
	<a href="#">El Caminito del Rey</a> 154
	<a href="#">Antigua fábrica de Cerámica</a> 162

## **Pedagogical and Educational Models**

### **SERBIA-UBFA**

## **173**

### **174**

COURSES	
<a href="#">IASA 48061-01/ 48062-01/ 48063-01</a>	174
<a href="#">MASA12050-04</a>	180
<a href="#">Workshop</a>	186
<a href="#">SAS EEZA 1.10.</a>	192

### **ITALY-IUAV**

### **198**

COURSES	
<a href="#">B77001</a>	198
<a href="#">B76005</a>	204
<a href="#">B76010</a>	210
<a href="#">SSIBAP</a>	216

### **CYPRUS-UCY**

### **222**

COURSES	
<a href="#">ARH 511</a>	222
<a href="#">ARH 517</a>	228
<a href="#">ARH 550</a>	234
<a href="#">CON 500 A-C</a>	240

### **GREECE-AUTH**

### **248**

COURSES	
<a href="#">02EE02</a>	248
<a href="#">07EB10</a>	256
<a href="#">LCIC</a>	264
<a href="#">01EE01 / 02EE01</a>	270

### **SPAIN-USE**

### **276**

COURSES	
<a href="#">2330051</a>	276
<a href="#">2330038</a>	282
<a href="#">2330050</a>	288
<a href="#">2330042</a>	296

## **Influence of National Policies on the Sustainability of Heritage**

## **303**

### **SERBIA-UBFA**

### **304**

### **ITALY- IUAV**

### **312**

### **CYPRUS-UCY**

### **320**

### **GREECE-AUTH**

### **324**

### **SPAIN-USE**

### **330**

### **Conclusions**

### **339**

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SERBIA

×

Ana Nikezić  
Jelena Ristić Trajković  
Aleksandra Milovanović

course

03

## Among Scales: Programming the New Modernity of Belgrade



### Workshop, N/A ["Among Scales" Programiranje predeone ekologije – nove modernosti Beograda]

#### UNIVERSITY LEVEL COURSE DETAILS



##### Institution

✗ University of Belgrade

##### Type of Institution

✗ Higher Education Institution

##### District

✗ Belgrade, Serbia

##### Department

✗ Department of Architecture (A),  
Department of Urbanism (U),  
and Department of Architectural  
Technologies (AT)

##### Faculty

✗ Faculty of Architecture

##### Study program to which this course belongs

✗ Extracurricular activity open  
for all study programmes at  
faculty (Undergraduate Studies  
in Architecture, Master Studies in  
Architecture, Master Studies in  
Interior Architecture, Master Studies  
in Integral Urbanism, Single-cycle-5-  
year studies in Architecture)

##### The position of the course in the structure of the study program:

✗ The course type is a workshop as  
a type of extracurricular, elective  
activity that is not formally provided  
by the study program.

##### Level

✗ Undergraduate  
✗ Postgraduate

##### Year/Semester

✗ N/A

##### Course Type

✗ Workshop

##### Elective or Compulsory Course

✗ Elective

##### ECTS

✗ 2 ECTS

##### Lectures/week (hours)

✗ 2

##### Studios/labs/week

✗ 19

##### Academic/ Teaching Personnel

✗ Mentor:  
Associate Professor Ana Nikezić, PhD.  
✗ Tutors:  
Research Assistant Aleksandra  
Milovanović, Teaching Assistants  
Aleksandra Đorđević and Jelena Basta  
✗ Critics:  
Assistant Professors Milica Milojević,  
PhD, Danijela Milovanović Rodić, PhD,  
and Jelena Ristić Trajković, PhD.  
✗ Coordinator: Research Associate  
Anđelka Bnin-Bninski, PhD.

##### Program of Study Content

Research Methodology Course



## COURSE CONTENT AND STRUCTURE

The main subject of research challenged within the workshop relates to the exploration of landscape as a heritage construct. Recognizing changes in natural conditions within the landscape and diversity in nature as a reflection of social, cultural and economic circumstances, the workshop examines the development of new analytical strategies towards establishing (1) integrated research of landscape patterns and (2) understanding of city morphogenesis. The workshop subject is the research of the relationship between urban and rural landscape, as well as the transformation of the natural into the cultural landscape. Workshop employed case study-based research through multiscale approach that are structured in several phases from phenomenon identification to their graphical interpretation.

## THE COURSE PURPOSE AND OBJECTIVES IN GENERAL AS WELL AS IN RELATION TO SUSTAINABILITY AND CULTURAL HERITAGE

The main objective Workshop was to look at current relational flows and gaps between urban and rural, architecture and nature, global flows and everyday life at the relevant spatial levels: scale XXL: territory - drawing an urban gradient, scale XL: morphology – mapping morphological character, scale L: typology - typological classification of housing patterns, scale M: program - programming of architectural structure, and scale S: ambience - collage sequences. Workshop research was approached primarily from the aspect of environmental changes within society, and the way those aspects affect the development of city's morphology, and also transformations of natural conditions.

## THE LEARNING OUTCOMES IN GENERAL (SKILLS, ABILITIES, KNOWLEDGE) WITH REGARD TO SUSTAINABILITY AND CULTURAL HERITAGE

The workshop includes a combination of several approaches to learning and

research, and accordingly different modes of communication and knowledge outcomes. These outcomes differ in relation to the realization phase of the workshop: (1) Thematic introductory lecture on chronological and historical-interpretative research through which the student gained basic methodological inputs for research, (2) PechaKucha presentations on recognized phenomena related to modernity-rurality, industrialization-sociology of housing, and harmonization of urban planning-social and economic problems of housing, (3) Transferring of historical material into digital drawings in various scales, and (4) Critical presentation of environmental aspects of housing landscape.

## KEY FEATURES



### TO WHAT EXTENT DOES THE COURSE ADDRESS ASPECTS OF SUSTAINABILITY AND PROMOTE CULTURAL HERITAGE AS A BASE FOR SOCIAL, ECONOMIC AND ENVIRONMENTAL DEVELOPMENT

#### SOCIAL



#### ECONOMIC



#### ENVIRONMENTAL



**THE EDUCATIONAL /TEACHING  
METHODOLOGY (GENERAL PRINCIPLES,  
PEDAGOGY AND MANAGEMENT  
STRATEGIES USED FOR CLASSROOM  
INSTRUCTION)**

Several methodological perspectives are distinguished: (1) Dialogical – conversations at an appropriate level and changing communication modes: one-to-one, one-to-many, many to one, many-to-many, (2) Teamwork – focuses especially on collaborative practice generating 'think back' approach, (3) Knowing in action – reflective activity from different perspectives descriptive, interactive, critical, creative, etc., (4) Social Narrative – understanding the complex problems of contemporary society and the urban environment, and their narrative implementation in the conceptual framework of architectural design. This systematic approach allows generating creative values as an interface between context, framing and narrative.

**TEACHING/LEARNING MATERIALS  
(DIDACTIC MATERIALS, RESOURCES,  
SOFTWARE, ETC.)**

The case study-based research covers 9 different large-scale housing settlements in Belgrade that were planned and implemented in socialist conditions (1963-1988). This means that each of these settlements has different design principles and a programming framework, which requires students to recognize the phenomena of modernity and rurality at assigned spatial levels and accordingly develop methods for their systematization through drawing. In that sense, the primary research material is historical material - original plans and projects of all nine residential settlements, as well as periodicals in the field of architecture and urbanism from the period of planning and construction of the settlements (Architecture Urbanism, Urbanism of Belgrade). The transfer of historical material to digital was carried out using CAD software and graphic design software.

**OBSTACLES, IMPEDIMENTS, PROBLEMS  
AND CHALLENGES REGARDING  
TEACHING SUSTAINABILITY OR/  
AND CULTURAL HERITAGE IN THIS COURSE (IF  
ANY). PLEASE MENTION THEM BRIEFLY**

✕ Both in Sustainability and Heritage

The workshop results indicate that students autonomously perceive environmental aspects, through partial overlap with social aspects, which is why it is necessary to develop additional educational strategies for the integrated study of sustainability aspects. In the process of anticipation of recognized phenomena within the corresponding scales, insufficiently developed awareness of different spatial levels of urban and architectural heritage (from the level of the landscape to the level of one spatial unit) is recognized.

**PRACTITIONERS/PROFESSIONALS/  
EXPERTS INVOLVED IN THE  
EDUCATIONAL PROCESS? IF YES,  
PLEASE MENTION THEIR EXPERTISE  
AND THEIR ROLE IN THE COURSE**

✕ No

The workshop was organized as an integral part of the International Symposium "Metro-Milieu: (Alter) Rurality As A Relational Gap Between Inhabiting Scales" and was followed by the organization of a thematic Seminar with the participation of educators and practitioners in the field of architecture, urbanism, protection of architectural heritage, and specifically rural heritage. Three keynote lectures in line with three scientific areas were organized with the aim of being a theoretical basis for research within the workshop: (a) Assembling Rurality in The Metro-Milieu (Professor Michael Woods, Human Geography), (b) Alter-Digital – Presence and The Role of Digital Art in Rural Environment (Professor Nataša Teofilović, Media and communication), (c) Entrepreneurship: Commons and Care (Professor Pieter Versteegh, Architecture and the Construction of Identity).

**EXTERNAL PARTICIPANTS, VISITORS  
GUEST LECTURERS, ETC, INVOLVED IN  
THE EDUCATIONAL PROCESS? IF YES,  
PLEASE MENTION THEIR EXPERTISE AND  
THEIR ROLE TO THE PROGRAM OF STUDY**

✗ Yes

External participants were involved through the organization of a Workshop exhibition, as well as through a discussion with the presentations of student results within the Metro-Milieu Symposium.

**RELATIONSHIP BETWEEN THE COURSE  
AND THE CURRENT LOCAL NEEDS/  
REQUIREMENTS OF LABOUR MARKET  
IN THE FIELD OF ARCHITECTURAL  
AND URBAN DESIGN IN RELATION TO  
SUSTAINABILITY AND HERITAGE**

The contribution of the workshop to the needs/requirements of the labor market in the field of architectural and urban design is especially important from the point of view of digitization of heritage and strengthening the capacity of students to transfer historical material into digital and create systematized reviews for different types of urban and architectural heritage and their further presentation.

**TO WHOM IT IS ADDRESSED (TARGET  
AUDIENCE)**

Students of different study programmes in the field of architecture and urbanism (Undergraduate Studies in Architecture, Master Studies in Architecture, Interior Architecture, and Integral Urbanism, Single-cycle-5-year studies in Architecture). The workshop concept would be significantly improved by including students whose interests and research areas are compatible with the assigned thematic framework (students of spatial planning, geography, sociology, etc.).

**Workload/weekly study hours**

✗ 21 hours (Lecture on Theoretical background and methodological framework (2h), PechaKucha (6h), Active workshop activities (10h), Final presentation for exhibition (3h).

**Language**

✗ Serbian

**Evaluation Methods**

✗ Oral Exam

✗ Research Presentation

**Grading System**

✗ Verbal

**Employment influence evaluation  
(alumni feedback about employability)**

✗ N/A

**RESULTS**

The result of the workshop is recognized on two levels - the first is a systematic chronological review of the residential settlements developed in Belgrade in the period 1963-1988 with the identification of the planning framework and the principal spatial-morphological and functional-conceptual ideas, while the second part of the contribution is reflected in the created "identity cards" of individual residential settlements through the identification of recognized phenomena at the analysed spatial levels. In this sense, the question of modernity was opened through three leading relations (1) modernity - rurality, (2) industrialization - sociology of housing, and (3) harmonization of urban planning - social and economic problems of housing, with the primary aim of housing manifestation as a humanistic and material assumption from the level of the comprehensive territory of the city to the level of the single housing unit, or from the sociological level of the collectivization to individualization of housing space. The results of the synthesis can be traced to three axes (1) a chronological line, that is, a timeline of housing development, (2) a thematic line through which the development and changes in the relationship between housing patterns and ecological processes are monitored, and (3) a scale line through which the distribution of design principles from XXL to S scale.

Representative examples of student projects:

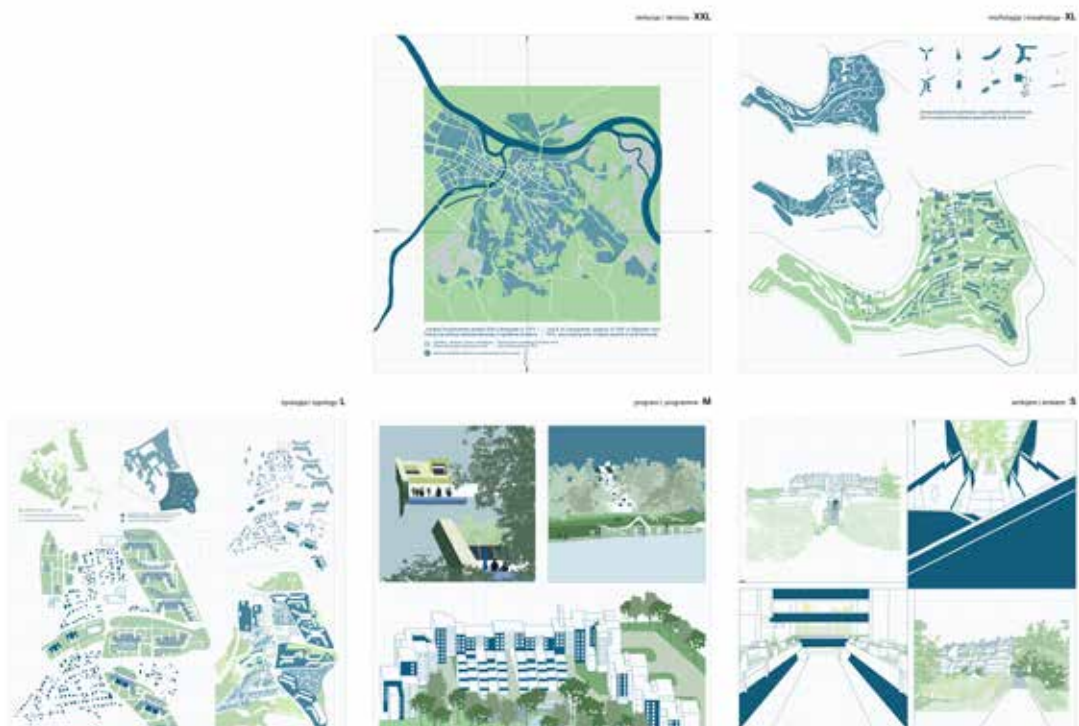


Figure 1. Case study Banjica settlement.  
 Students: N. Ašković, M. Stojković, S. Todorović

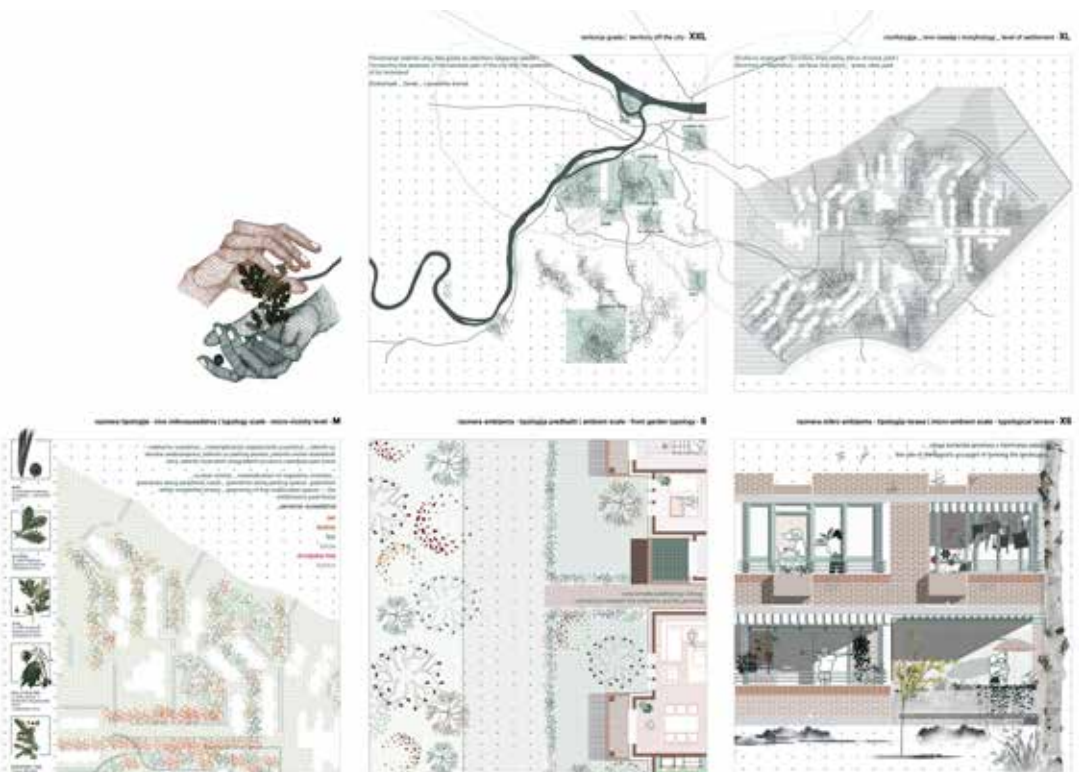


Figure 2. Case study Cerak vinogradi settlement  
 Students: A. Anđelković, M. Milošević