

STUDENT EXHIBITION: ENVIRONMENTAL REGENERATION OF LOWER DORĆOL Green Infrastructure in a Dense Urban Fabric

4th-year Bachelor's Degree Students

Course: Ecology and the Built Environment

Mentors: Professor Dr. Darinka Golubović Matić, Assistant Professor Dr. Bojan Končarević, Faculty of Construction Management, Department of Architecture and Urban Planning

ABOUT THE COURSE

The Ecology and the Built Environment course is focused on acquiring theoretical and practical knowledge about contemporary approaches to planning and designing urban spaces in the context of climate challenges, sustainable development, and environmental protection. Particular emphasis is placed on the application of green infrastructure principles and urban ecology, as well as on the integration of natural systems into densely built urban environments.

Through theoretical and practical work, students gain knowledge about the impact of urban structure on quality of life and explore possibilities for transforming existing spaces with the aim of increasing ecological resilience, reducing pollution, and improving public spaces.

The curriculum is based on the principles of sustainable development and encompasses all 17 Sustainable Development Goals (SDGs). In the theoretical component, students are introduced to the environmental policy of the Republic of Serbia and its alignment with European Union legislation, with special attention given to the Paris Agreement and the New Urban Agenda.

In addition, students acquire knowledge of environmental impact assessment, with an emphasis on methodologies that enable the understanding and minimization of the negative effects of urban interventions.

CURRICULUM

In the academic year 2025/2026, students of the Ecology and the Built Environment course worked on a project for the environmental regeneration of Lower Dorćol — one of the oldest and historically most significant Belgrade neighborhoods, characterized by pronounced ecological challenges and considerable potential for the introduction of green infrastructure into a densely built urban fabric.

The project was carried out by 13 student teams, organized into four parallel research modules: urban analysis, ecological analysis, social analysis, and infrastructure analysis. Each team conducted fieldwork, GIS mapping, and a participatory process with local residents, and subsequently developed concrete design solutions aligned with the Development Plan of the Stari Grad Municipality 2025–2031.

The entire work was conducted in accordance with the principles of the New European Bauhaus (NEB) — a European Union initiative that integrates sustainability, inclusivity, and aesthetics in the design of spaces. The NEB framework allowed students to view their projects not only through ecological, but also through social and cultural values of place.

The theoretical approach also incorporated the 3–30–300 principle, a scientifically grounded framework for urban greenery planning. This principle holds that every resident should have a view of at least three mature trees from the space they inhabit, that every urban neighborhood should have at least 30% canopy cover, and that public green space should be accessible within no more than 300 meters. This ensures the continuous presence of greenery at the visual, spatial, and functional levels. Students conducted experimental measurements to verify this principle at specific locations in Lower Dorćol, analyzing existing canopy cover, accessibility of green areas, and visual contact with greenery from the residential stock, thereby directly linking the theoretical framework to design decisions.

As part of the project, a collaboration was established with the firm Beovrt (landscape architecture) from Belgrade, whose experts delivered lectures on green walls, green roofs, and trees in urban environments, and also participated as advisors to student teams during the development of the projects.

Upon completion of the project, students are equipped to conduct multi-layered analysis of urban areas using GIS tools and field methods, identify potential for introducing green infrastructure in dense urban fabric, develop participatory processes and engage communities in planning, and prepare design solutions aligned with planning documentation and legal regulations.

POSTER OVERVIEW

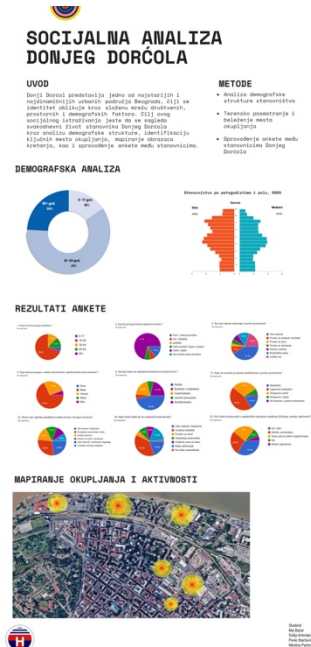
PROBLEM ANALYSIS

Poster No. 1 – **Urban Analysis of Lower Dorćol**, Lazar Ostojić, Anđela Vuković, Aleksandra Petričević, Teodora Janković, Katarina Blagojević, Nina Stjepanović

Poster No. 2 – **Social Analysis of Lower Dorćol**, Pavle Starčević, Sofija Antonijević, Mia Bačar, Nikolina Pantović, Ivana Pavićević



Poster No.1



Poster No.2

Poster No. 3 – **Community Needs Analysis for Public Spaces**, Nikolina Đurović, Tamara Stojanović, Milica Jevtić, Sofija Perišić, Emilija Samardžić



Poster No.3

Poster No. 4 – **Ecological Problems of Lower Dorćol – 1**

Poster No. 5 – **Ecological Problems of Lower Dorćol – 2**, Vukota Vujačić, Julija Šebek, Ana Šebek, Jovan Kovačević, Ognjen Živanović, Nemanja Čolić, Đorđe Milenković



Poster No.4

Poster No.5

DESIGN SOLUTIONS (specific interventions, strategies, and design)

Poster No. 6 – **Urban Pockets – Lower Dorćol**, Anja Mitrović, Ksenija Vasiljević, Nikolina Čikarić, Simona Sadiković, Luka Jakšić, Jovana Bučan

Poster No. 7 – **Multifunctional Parks and Waste Sites**, Teodora Vukašinović, Andrijana Ašković, Danica Novaković, Martina Brković, Tijana Golubović, Natalija Lazarević



Poster No.6



Poster No.7

Poster No. 8 – **Pocket Parks**, Ivana Ljauko, Una Injac, Magdalena Gajić, Anja Mandić, Selena Momčilović, Mina Knežević, Radojka Slijepčević

Poster No. 9 – **Preserving Authenticity Through Contemporary Interventions**, Maša Črkić, Dunja Andrić, Anja Gvozdrenović, Anja Antić, Emilija Gubernić, Jelena Rajčić, Anja Prtenjak



Poster No.8



Poster No.9

Poster No. 10 – **Smart Technologies – Sensors and Irrigation**, Milica Smiljković, Nataša Rafailović, Jana Nikitović, Iva Jelenković, Jovan Tomić, Anja Pavić, Sofija Gašić



Poster No.10

Poster No. 11 – **Reducing Exhaust Emissions Through Land and River Traffic – 1**

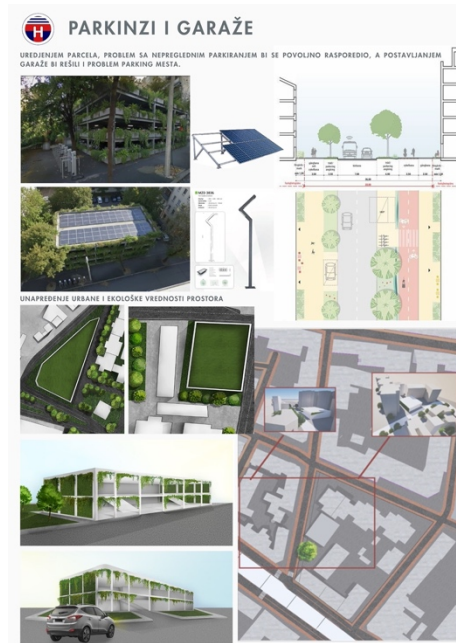
Poster No. 12 – **Reducing Exhaust Emissions Through Land and River Traffic – 2**

Poster No. 13 – **Reducing Exhaust Emissions Through Land and River Traffic – 3**

Poster No. 14 – **Reducing Exhaust Emissions Through Land and River Traffic – 4**, Anastasija Kojičić, Jovana Nešić, Milica Blagojević, Teodora Stojanović, Sofija Babić, Lela-Eleni Milona, Tea Stojanović, Nikola Rajković



Poster No.11



Poster No.12



Poster No.13



Poster No.14

Poster No. 15 – **Green Roofs and Green Walls**, Mina Madžarević, Sofija Đorđić, Kristina Stanisavljević, Mira Tutunović, Anastasija Milovanović, Mia Jovanović, Ivana Ikodinović, Nikoleta Jevtović

Poster No. 16 – **Sustainable Architecture**, Anđela Jankovski, Jovana Lučić, Jovana Obradović, Isidora Đurić, Selena Bogdanović



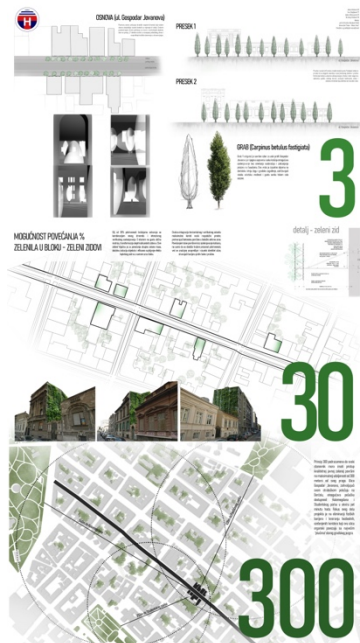
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CONCEPTUAL METHODOLOGICAL FRAMEWORK

Poster No. 17 – **3-30-300**, Jelena Ninković, Strahinja Rašković, Tara Stojiljković, Isidora Milovanović



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