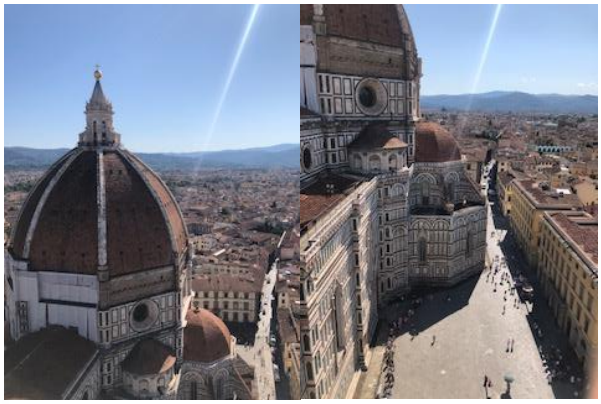
Term: **IV**	SHARED FLOORS - urban Spaces, Heat islands, And water Runoff viewed through the Economic Dimension: Focus on Locally Optimal Options for Resilient Street paving. - workshop **Elective design III**	ECTS: (3(4)ECTS)
Type of studies: **BSc in Arch.**		Academic year **2025/2026**

Department

DEPARTMENT OF HOUSING ARCHITECTURE



The SHARED FLOORS - Florence (source: *BIP organizers)*
The historic center of the city of Florence (source: *Justyna Borucka)*

Seminars & assignments: 30 h

Teachers**:**

dr inż. arch. J. Borucka in collaboration with UNIFI University of Florence, Italy (prof. Giovanna Acampa) and Universitat Politècnica de Catalunya – UPC (prof. Pere Fuertes)

Brief description of the subject:

SHARED FLOORS - urban Spaces, Heat islands, And water Runoff viewed through the Economic Dimension: Focus on Locally Optimal Options for Resilient Street paving. - workshop" - Case Florence, Italy

This programme is meant to analyse resilient, economically viable paving solutions tailored to historic city centres. Focusing on locally optimal options, it will consider cost-efficiency, public perception, safety, and long-term sustainability of open urban spaces. Indeed, as climate increasingly changes, the design of urban paving plays a vital role in reducing heat island effects and managing stormwater runoff. In historic city centres, these challenges are coupled with the need of preserving aesthetic and cultural values.

Goal of the course:

The Elective Design will be organized within the **Blended Intensive Programme** (BIP) **"SHARED FLOORS - urban Spaces, Heat islands, And water Runoff viewed through the Economic Dimension: Focus on Locally Optimal Options for Resilient Street paving"** .

The **SHARED FLOORS** programme begins with an Introduction to the Topic through an initial online session, followed by direct training in a workshop format during the face-to-face phase, and ends with a final virtual discussion session for discussion and consolidation of knowledge. The aim is to implement a participative and transdisciplinary teaching method based on learning by doing,improving students' skills in the validation and regeneration of spaces for climate change resilience. The programme is designed to raise awareness on climate resilience actions, focusing on case studies of European contexts and intervention practices (especially regarding pavement design) across different cultures and geographical settings.

Students participating in workshop in Florence will be supported by short mobility grants from Erasmus+ program

Objectives:

The purpose of this course is to introduce students to the crucial role and importance of the study which will make extensive use of spatial overlays to provoke more complex urban environments. Students will be asked to:

- identify materials and paving techniques commonly used in the historic urban centres public spaces
- integrate the valuation of paving solutions from cost-efficiency perspective
- evaluate the impact of paving choices on urban heat island effects
- analyse the way different paving solutions influence rainwater runoff and urban water management, looking at the blue-green infrastructure
- examine pedestrian safety and user perception of paving

Course content/schedule:

Mininum number of foreign students participant is 20 max 24: from partner institutions Universitat Politecnica de Catalunya (ETSAV BarcelonaTech): max. 12 students & the **Politechnika Gdańska (GdanskTech)max.12 +(3 reserve status)**. Italian students from Florence University will also be part of the programme. The students will work in international groups.

Shared Floors is designed as an international on-hand workshop with seminar and lectures delivered in a mixed mode (in presence, 5 days at the spaces of the DIDA, Department of Architecture of the University of Florence - scheduled for June 2026 - and 12 hours approx. in virtual, with remote learning and cooperation activities
- before and after in presence activities

Virtual Part:

May, before in-presence. July, after in-presence./ dates to be confirmed

Mobility in-presence:

June - July **/ 29.06-4.07.2026**

Venue of the physical mobility (UNIFI or other places in Italy) University of Florence at the Department of Architecture (DIDA UNIFI)

PROGRAMME OF ACTIVITIES AND EDUCATIONAL OFFER

Introductory Online Phase:

Introduction and Theoretical Classes: An initial online session will present the core concepts, followed by theoretical lessons that include presentations by faculty members from the partner institutions. These sessions will showcase research and real-world solutions related to cost management, climate resilience and urban interventions.

Local Case Studies: During the online phase, each partner will introduce and analyse local good practice or case study. Students will thus examine successful climate resilience strategies in different local environments and better understand how local conditions shape cost effective urban design solutions. This should trigger an in-depth online joint discussion. This part and its outcomes will serve as a preparatory phase and starting point to the following workshop in Florence.

Face-to-Face Phase:

Practical Activities and Workshop: Hands-on workshop will be carried out in person, offering students the opportunity to apply theoretical knowledge to real-world challenges selecting with the s*ite manager of the UNESCO World Heritage site "Historic Centre of Florence"* a meaningful public space in the city centre of Florence as test area. These activities will focus on sustainable urban design, water management, and climate change adaptation strategies, optimizing their selection through a multi criteria analysis. *Interactive Learning and Discussions*: The face-to-face sessions will provide space for deeper discussion, collaboration, and the sharing of experiences among students and academic institutions, ensuring a comprehensive learning experience. *Reflection Session:* In the programme final session, students will reflect on the face-to-face workshops, discuss the outcomes, and consolidate their learning. This session will also offer an opportunity to summarize key takeaways and discuss the application of the knowledge gained throughout the program. By the end of the program, students will have gained practical skills in climate resilience, specifically in sustainable urban design and economically viable pavement solutions. They will also learn to integrate environmental, social, and cultural factors into their designs, ensuring that their solutions are technically sound, locally relevant, and user-centred.

Final Online Phase:

The Virtual Component following the physical workshop is an essential extension of the onsite learning experience. It aims to reinforce the knowledge gained during the workshop, facilitate further discussion, and encourage the application of concepts in practical scenarios. This session is designed to provide participants with tools and resources that support ongoing learning and collaboration.

Students participating in workshop in Florence will be supported by short mobility grants from Erasmus+ program

Methodology: The workshop will take its point of departure in a methodology based on following:

Literature Review: Examine sustainable and cost-efficient paving practices within the context of historic urban environments; **Case Studies:** Analyse sustainable paving solutions successfully implemented, creating a database of best practices including cost management; **Surveys and Interviews:** Use digital tools to collect data on from residents and visitors' perceptions of safety and public space usage materials and design; **Develop initial design simulations and insights** that can shape future strategies for urban planners and local governments; **Graphic analysis and modelling:** Apply digital tools to assess the impact of various paving solutions on urban heat islands and stormwater runoff.