AR-401(bh)

Studio MA1 (Weyell Zipse)

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Cursus	Sem.	Type
Architecture	MA1, MA3	Obl.
Mob. AR	H	Opt.

Language of teaching	English
Credits	12
Withdrawal	Unauthorized
Session	Winter
Semester	Fall
Exam	During the semester
Workload	360h
Weeks	14
Hours	**6 weekly**
Courses	2 weekly
Project	4 weekly
Number of positions	

Il n'est pas autorisé de se retirer de cette matière après le délai d'inscription.

Remark

Inscription faite par la section

Summary

The Systemic Type explores architecture as an open system, adapting to changing environmental, social and programmatic conditions. Typology is understood not as a fixed model, but as a set of relationships between structure and space, inside and outside, climate and material, permanence and change.

Content

The Systemic Type
Modernity marked a profound rupture in the relationship between architecture and its environment. New technologies, industrialized construction and, above all, the increasing availability of affordable fossil energy allowed buildings to become progressively independent from the climatic and material conditions of their specific location.
For centuries, architecture had evolved in close relation to weather conditions, available resources and local ways of living. Therefore, many principles originating in vernacular and autochthonous architectures were inherently systemic: orientation, form, mass, openings, materials, surrounding landscape and uses worked together. The courtyard house, the arcade, the deep threshold or the pitched roof were not just formal characteristics. They were spatial responses to specific environmental and social conditions.
With the intensification of mechanical climate control, many of these relationships gradually lost their necessity and interdependency. Environmental comfort was increasingly transferred from architecture itself to technical systems, disconnecting built structures from their physical context. A generic floor plan could accommodate different programmes because climate was controlled artificially; a glass façade could be used almost regardless of orientation because technical systems compensated for solar gain or heat loss. What had once been an integral part of architectural form, typology and construction became a separate layer of engineering.
Today, under fundamentally different environmental conditions, this separation needs to be reconsidered. The question is not to return nostalgically to vernacular architecture, nor to reject technology. Instead, the studio seeks to learn from precedents in which spatial, structural, climatic and social principles operate as an interrelated whole.
The Systemic Type investigates architecture as an open system capable of adapting to changing environmental, social and programmatic conditions over time. Rather than a fixed model, typology is understood as a set of relationships between structure and space, inside and outside, climate and material, permanence and change. Can architecture provide a stable framework while remaining open to transformation? Can it accommodate different uses, seasons and forms of occupation without relying on ever more complex technologies?

Rosental - From Enclave to City

The Rosental site in Basel will serve as the field of investigation for *The Systemic Type*. As one of the oldest sites of Basel's chemical industry, Rosental has been continuously transformed over the last 160 years. Its heterogeneous collection of buildings reflects changing forms of production, research, technology and spatial requirements.
Today, the formerly closed industrial and research campus is facing an important renewal. Indeed, the site is expected to become significantly denser while gradually opening to the public. What has long functioned as an enclave within the city will become part of the surrounding urban fabric, establishing new connections and creating new public spaces.
This transition raises a fundamental question: How can an area become simultaneously denser, more open and more ecological while building on its specific qualities and identity?
The project will investigate how these existing conditions can become a starting point for transformation, establishing new systemic relationships between buildings, landscape, density, publicness and ecological performance.
In that context, buildings and landscape are considered as an interconnected system. While climate change and loss of biodiversity demand more vegetation and permeable surfaces for shade, water retention and ecologically connected habitats, large areas of the ground of Rosental are sealed and heavily contaminated by decades of industrial use. Decisions about what to preserve, add, remove or transform therefore have consequences beyond the individual building.

Keywords

Architecture, Climate, Landscape, Technology, Transformation, Typology, Type

Learning Outcomes

By the end of the course, the student must be able to:

- Contextualise
- Critique
- Decide
- Design
- Develop
- Structure
- Systematize
- Transpose

Teaching methods

Three phases
The semester is structured in three consecutive phases: Learning from others, Anatomical Reading and Systemic Design.
Phase 1 - Learning from others: Students first investigate built references and extract transferable architectural principles. The precedents refer to two main topics: transformation of existing structures and systemic architectures, in which typology, structure, climate, material and use are conceived as interdependent parts of a larger system. Rather than formal inspiration, students will identify strategies and operations that can become transposable architectural knowledge.
Phase 2 - Anatomical Reading: Turning towards the site Rosental, students will investigate one existing building in its direct surroundings. This analysis will question what is permanent or temporary, how structure and typology relate, how specific a building is to its original programme, how it negotiates climate and how it relates to the ground and its surroundings.
Phase 3 - Systemic Design: Finally, reference and site will be brought together. Principles identified earlier will be projected onto the buildings at Rosental. This confrontation with another structure, programme or climatic condition will inevitably produce friction and unexpected results. In the design phase, the references act as a catalyst for design: through transfer, adaptation and transformation, an existing architectural idea can develop into a new and specific proposal.
The students will work in pairs, learning to establish a dialogue and develop a project together.
Throughout the semester, the different phases will be accompanied by input lectures from invited experts and the teaching team. These lectures will introduce additional perspectives and knowledge related to the central themes of the studio, including typology, transformation, structure, climate, ecology and the specific conditions of the Rosental site.
A study trip will be organized during the semester. The associated costs are expected to be approximately CHF 400. In addition, students should anticipate the usual expenses for model-making and printing during the semester.

Learning Objectives
Students will learn to read existing architecture as a system of relationships rather than as a fixed object. They will develop methods for identifying underlying typological, structural, climatic and spatial principles and for distinguishing between permanent and changeable elements. Through the transfer and adaptation of reference strategies, students will explore transformation as a design method and develop architectural proposals that integrate building, climate, landscape and changing forms of use.
The studio draws on theories of typology, open systems, adaptability and environmental design. Historical and contemporary positions, from typological thinking and Open Building to bioclimatic design and ecological systems theory, provide different perspectives on architecture as a framework for change. Rather than understanding sustainability as an additional technical layer, the studio investigates how environmental, social and material questions can become integral to architectural form, structure and type.

Assessment methods

Throughout the semester, students' work will be assessed through a combination of formal and informal evaluations, culminating in the final grade after the final review. This grade reflects the entire design process and is based on key criteria that account for both the architectural output and the student's engagement. At least two intermediate reviews are held. After each review, group discussions address the overall studio experience, and individual talks are available for personal concerns.

Resources

Virtual desktop infrastructure (VDI)

Yes

Moodle Link

- https://go.epfl.ch/AR-401_bh