Universität Innsbruck
Department of Experimental Architecture, Unit BC
Studio Colletti



Image by Luis Pitterlein (2024)

Bachelor Entwerfen

SECOND ASSEMBLY

Designing with Salvaged Fragments

Betreuer: Peter Massin

"The most environmentally benign building is the one that need not be built because it already exists" (Grammenos and Russell, 1997)

"The greenest building... is the one that is already built." (Elefante, 2007)

Buildings are material archives. Their structures, envelopes, openings and interiors contain geometry, labour, resources and cultural information. During conventional demolition, these relationships are usually reduced to material streams. This studio investigates how selected building fragments can retain their specificity and become operative design agents of a new architectural project. Reuse is introduced at the beginning of the design process through survey, digital reconstruction, selection, logistics, joinery design and reassembly.

SECOND ASSEMBLY is a follow-up to the Bachelor Design Studio MATERIA CHIMERA (2024/25) – link to student projects.

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AIMS

The aim of the studio is to develop a mixed-use urban building from heterogeneous, pre-formed building fragments. Students learn to transform an existing material inventory into architectural decisions and to resolve the resulting spatial, structural and aesthetic mismatches. Digital tools are used to capture, compare, select, arrange and connect fragments. Each analytical step will lead to a concrete design action and result.

TASK

The studio focuses on transforming and relocating salvaged building fragments from various infrastructure or buildings that may be demolished in central Innsbruck and its vicinity. Students design a mixed use urban building in Innsbruck. Each project uses an individually curated set of fragments from a shared digital inventory. The inevitable gaps in the fragment composition will be completed with designed additions.

METHODS

Students will develop individual projects, supported by shared survey, catalogue and testing phases.

The studio starts with a review of the students' portfolios. Their particular expertise in drawing, modelling, computation, fabrication or visualisation will be identified and deliberately deepened.

Students will survey, analyse and digitally reconstruct building parts in a shared inventory. Each component receives a fragment passport documenting origin, geometry, material, condition, connection, weight class and the confidence of available information. Students then select a limited kit of parts and test it through physical models, digital configurations and transport envelopes.

The design process is cumulative and organised through five gates: Evidence, Selection, Assembly, Interface and Resolution. Requirements are introduced step by step to calibrate the constraint load. Digital work is evaluated by the decisions it enables. The central design task is the development of spatial and constructive transitions between incompatible systems, including joints, inserts, tolerances, secondary structures and reversible additions.

PROJECT PATHWAYS

All students work on the same site, resource inventory and architectural task. At the Evidence Gate, each student selects one of three equally valued project pathways (building construction / Baukonstruktion, Ornament & digital fabrication, AI Toolmaking & vibe coding). The pathway defines the depth of supervision and an additional project-specific output. It does not exempt the project from the shared spatial, constructive and representational requirements.

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