



House on Buda hills | a-platz architects

Alpine Flux

Sensing Architectures for the Alps

848106 PJ Design Studio 1 | Daria Smakhtina

Affiliated courses: 848107 SE Architectural Visualisation | Daria Smakhtina

Brief

The Alps are a dynamic, living entity—a slow, beautiful performance in deep time. They breathe, shift, erode, and grow. The 'Alpine Flux' studio challenges the perception of the mountain as a static landscape and explores possible futures of symbiotic coexistence in this fragile context.

We will work within the setting of one alpine valley to create the framework for a site-specific cultural hub: not a singular building, but a distributed cultural network of program-specific small-scale architectural objects woven into the very fabric of the landscape. Working in teams, students will design one of the objects from a series of architectural interventions: off-grid art-residencies, transient gallery spaces, educational and cultural outposts situated at diverse altitudes and ecological contexts, all linked by a common ecological route. This assemblage will act as an enduring ecological and cultural infrastructure – a series of sensitive instruments – that makes the invisible forces of the mountain—geological time, ecological niches, climatic gradients—perceivable to its visitors year-round.

The studio will develop a design approach that bridges nature, technology, and society, and explore themes of time, scale, sensitivity, and circularity, while considering each building's entire life cycle. The core question driving the studio is: How can a distributed network of site-specific architectural interventions become a vital and enduring system for its alpine valley, acting as 'sensible portals' that reveal the hidden narratives of the alpine environment and foster a year-round dialogue between the community, its culture, and the extreme environment?

Methods

Students will work in groups to map relevant ecological data and develop strategies for designs sensitive to natural conditions, local biodiversity, and the challenges of four-season operation. We will explore the elements of Light, Wind, Water, and Vegetation at different altitudes as primary drivers for architectural massing, structural design, and space organisation, as well as for harnessing local energy resources. Special attention will be paid to the principles of regenerative design through identifying local underutilised materials, and focusing on reuse, recycling, and closed-loop methods.

The 15-week-long studio is roughly structured into the following steps:

- **Site Sensing:** Analysis and deep mapping of the valley's ecological and cultural narratives to identify key nodes for the network.
- **Precedent & Concept:** Research and formulation of a core architectural concept in response to a specific site within the network.
- **Environmental Tuning:** Understanding micro-climatic conditions to develop massing and passive design strategies.
- **Architectural Synthesis:** designing volumes and programming spaces through iterative design.
- **Temporal Resolution:** Considering seasonal changes, weathering, and the building's life cycle.
- **Final Assembly:** Production of a collective physical site model with groups' multi-material detailed models of each intervention.

Case study and site

The studio will operate on the vertical transect of a valley, from its glacial peak to its river-fed base. During the first weeks, we will select a valley in the Tyrolean Alps as our specific site and explore the context on a field trip (TBD). Designs will begin with a deep reading of a specific altitude and its ecological and cultural stories as part of the larger network, and develop towards context-aware architectural objects.

Learning outcomes

Upon completion of this studio, you will be able to:

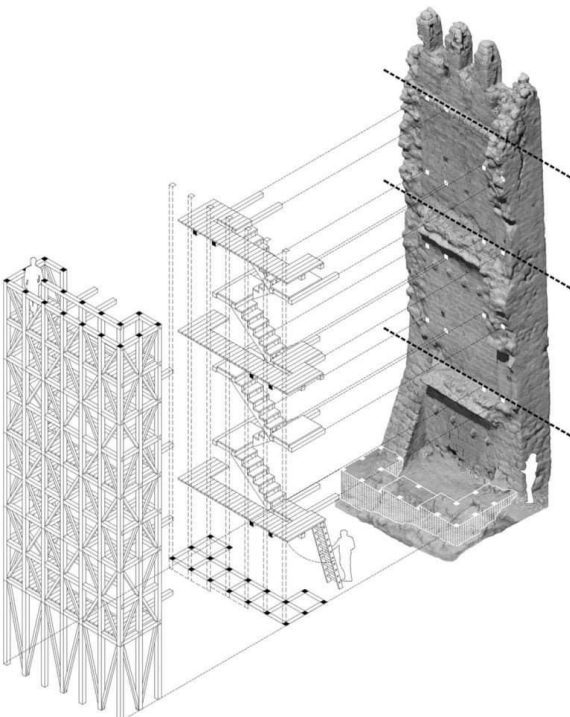
- Design resilient, adaptable, and context-sensitive small-scale buildings.
- Integrate principles of passive environmental systems into architectural design.
- Develop a design thesis that responds to macro and micro site conditions.
- Articulate a material and life-cycle strategy for a project.
- Work collaboratively to map a complex site and present design proposals through a variety of media.

Evaluation criteria

- **Innovative design solution:** Creativity and originality in translating the brief into architectural design.
- **Technical Proficiency:** Ability to develop a coherent concept and corresponding intervention.
- **Contextual and Environmental Sensitivity:** Responsiveness of the design to the site's specific ecological, climatic, and temporal conditions.
- **Presentation Quality:** Clarity and professionalism in presenting the design process and final proposal.

Requirements

We expect an affinity for a digital-physical workflow and specifically invite those students with an interest in these methods to express their interest. While focusing on concepts and design development, we encourage students to leverage advanced modelling and fabrication software as integral tools for design exploration and resolution.



Recovery of Merola's Tower | Carles Enrich Studio



Robbie Walker | Sawmill treehouse

First meeting

01.10.2025, 9:00 at SR HB West (3rd floor)

Reading List

Bridle, J. (2022) *Ways of Being: Animals Plants, Machines: The Search for Planetary Intelligence*. Penguin Books, London, New York.

Colletti, Marjan, and Peter Massin, eds. *Meeting Nature Halfway: Architecture Interfaced Between Technology and Environment*. Peer-reviewed. Innsbruck: innsbruck university press, 2018.

Morton, Timothy (2010): *The Ecological Thought*. Cambridge, Mass: Harvard University Press.

Podcasts

Night White Skies - 002 Timothy Morton - Dark Ecology. | 012 Geoff Manaugh - Sentient Landscapes

