

PENS-240

Saxa Loquuntur: Culture of construction

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Cursus	Sem.	Type
Projeter ensemble ENAC	BA4	Opt.

Language of teaching	English
Credits	4
Withdrawal	Unauthorized
Session	Summer
Semester	Spring
Exam	During the semester
Workload	120h
Weeks	
Hours	48 weekly
Courses	4 weekly
Exercises	22 weekly
Project	22 weekly

Number of positions

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

Summary

The course explores how material extraction, territorial change, trade, local traditions, and industrial production interconnect. By examining scales from territory to building detail, students learn how various professions interact to shape the built environment.

Content

The materials used for construction traditionally came from the surrounding territory. Searching for resources that enabled us to settle down connected us to the land and shaped not only our built environment, but also our social relationships to place. Each material offered specific design options determined by its own character. This led to the development of places with distinct identities. There were similarities in their aesthetics but also differences between territories. Architecture was thus shaped using materials, the social understanding of space, and the design elements explored in different ways. Knowledge about materials and their use was developed locally but also exchanged across borders.

We can view building material as a mass that, once tapped, could be composed into different architectures in a process of constant change. With industrialization, material was gradually freed from its territorial ties. Trade and logistics flow increasingly set it in motion. The local connection dissolved. This was followed by a pluralization of styles, with globalized architectural production continuously seeking new models and trends without respecting the material-defining characteristics that once guided design. Technical and local knowledge was partly separated from the material. Standards developed that promoted exchange.

Today, architectural resources are under enormous pressure. The construction industry must address how it will assume responsibility for roughly one third of the waste generated worldwide. This raises the question of how we can re-localize material knowledge, and how architectural education might respond.

The course is intended as a field study. We will travel to the Ossola Valley near the Simplonpass to north Italy for one week. The valley is characterized on the one hand by a very old building tradition using natural stone and, on the other, by the industrial quarrying of granite and marble following its connection to the railway network. Within this tension, we will explore and re-evaluate history and present. The course teaches how we can extract knowledge from traditional building culture and how we can evaluate current networks of material flows.

In 2025, the week will focus on:

1. Study hike through the territory to identify building materials.
Guided tour of a quarry and quarrying technology.
2. Evaluation of post-production after quarrying in an industrial production facility and in a traditional craft business for stone roofing.
3. Study of traditional natural stone buildings.
Typological order of a settlement.
Stone masonry _ structural and aesthetic perspectives.

4. Stone masonry as a structural challenge.

Visual inspection and mechanical characterization of stone masonry.

Conceptual design of stone masonry elements.

Vulnerability of stone masonry structures and opportunities for future use.

5. Craftsmanship and practice.

Practical construction with natural stone at full scale (1:1) in the construction of a building element / wall fragment.

Teaching of traditional craftsmanship and tools.

At the end of the course, each student must give a 15-minute presentation on at least two parameters studied in relation to building with natural stone, using two different scales such as territorial, local, industrial or 1:1.

The course is organized with support and in partnership with the Fondazione CANOVA (1)

Learning Outcomes

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

- Analyze Analyze a territory, its context and an existing building structure.
- Develop Develop independently a consistent understanding between territory and material
- Explain Explain a focus and its theoretical framework.
- Sketch Practical experience by sketching in theory and building in practice.

Resources

Bibliography

(1) <https://bigsee.eu/interview-with-ken-marquardt-founder-of-the-fondazione-canova/>

(2) "Häuser und Landschaften der Schweiz",

Richard Weiss, Haupt Verlag, 2017

(3) "The Mushroom at the End of the World On the Possibility of Life in Capitalist Ruins"

Anna Lowenhaupt Tsing, Princeton University Press, 2021

(4) Atlante Dell'edilizia ruale in Ticino, Edizioni scuola tecnica superiore de Cantona Ticino

Ressources en bibliothèque

- [Find the references at the Library](#)

Notes/Handbook

The organisation asks participants to bring their own bicycles, which will be transported centrally from Lausanne to Domodossola. The aim is to ensure local mobility for the course with a low carbon footprint. Participants must organise their own travel to and from Domodossola.

Moodle Link

- <https://go.epfl.ch/PENS-240>