COMUNITÀ MONTANA ZONA DEL MATESE

GREEN COMMUNITY

“Matese Green & Smart: Innovazione, Partecipazione e Sostenibilità”

INTERVENTO N. 5

“Matese Building Lab”

Course Abstract

Natural Construction

This e-learning course provides a practical introduction to **natural construction**, understood not as a nostalgic return to traditional building, but as a contemporary design approach that connects materials, territory, health, comfort, life-cycle thinking and technical performance. The course explains that natural materials only generate real value when they are selected, designed, installed, documented and maintained correctly.

Across eight teaching units, learners are guided through the main principles of natural building: the meaning of natural construction, the evaluation of natural materials, construction techniques, compatible building systems, energy performance, hygrothermal behaviour, indoor health, renovation of existing buildings and the relationship between natural materials and the regulatory framework.

The course highlights that the choice of materials such as timber, cork, plant fibres, hemp, straw, raw earth, lime, local stone and mineral finishes cannot be based on appearance or generic “green” claims. Each material must be assessed in relation to its function, field of use, declared performance, compatibility with the building, durability, safety, maintenance requirements and documentary evidence.

Particular attention is paid to the building as an integrated system. Natural construction depends on the interaction between structure, envelope, finishes, services, construction details, installation quality and long-term maintenance. The course therefore examines stratigraphy, continuity of insulation, moisture protection, thermal bridges, ventilation, indoor air quality and the role of correct site execution in achieving real performance.

A key focus is the renovation of existing buildings and villages in the Matese area. The course presents the existing building stock as a resource, stressing the environmental, cultural and

economic value of reuse, adaptive renovation, reduction of land take, conservation of embodied energy and protection of local identity. Natural construction is presented as a way to support compatible recovery, especially in buildings with stone masonry, timber elements, lime plasters, rural heritage and historical character.

The teaching approach is strongly operational. Learners are encouraged to transform technical knowledge into practical tools such as material sheets, compatibility checklists, stratigraphy sheets, sample specifications, evidence repositories and local case studies. These tools help avoid generic uses of terms such as “natural”, “bio-based” or “sustainable” and support clearer decisions for design, procurement, construction, communication and maintenance.

By the end of the course, participants will be able to understand the principles of natural construction, evaluate natural materials critically, recognise the importance of compatibility and installation quality, connect natural building solutions with energy performance and indoor health, and apply this knowledge to the recovery and improvement of local buildings. The course is especially relevant for designers, municipal technical staff, construction companies, public officers, schools, tourism operators, local communities and stakeholders involved in sustainable building renovation and territorial development.