ETH zürich | School for Continuing Education

CAS ETH in Regenerative Materials – Hygrothermal Specialisation

earth – bio-based – reused

D BAUG

Think regenerative!

It is time to move beyond sustainability. Innovative solutions utilising local resources such as earth, bio-based, and reused materials are emerging globally. These materials drive regenerative outcomes by restoring and enhancing the surrounding natural and social environment.

The CAS ETH in Regenerative Materials – Hygrothermal Specialisation is an international programme launched by the Chair of Sustainable Construction. This programme promotes the use of regenerative materials to design and implement high-efficiency building envelopes using renewable resources, providing a robust foundation in hygrothermal material properties and simulation tools.

Regenerative hygrothermal materials: Straw, earth, lime-hemp and agricultural waste leading the way to sustainable building solutions.

Objectives

The programme teaches participants to quantify indoor air quality and comfort improvements, reduce energy demands, forecast moisture-related degradation risks and design for durability and long-lasting performance with earth, bio-based, and reused materials, considering HVAC systems and occupant comfort.

Professional perspectives

The programme ensures a significant and lasting impact on participants' professional development. Graduates are equipped to work as project managers in architecture or engineering offices, for municipal technical services, or as portfolio managers, developers, and members of NGO. Alumni of the CAS-RM-Hygro programme join an active and growing professional network.

Target group

Decision-makers and practitioners in the construction sector from Switzerland and abroad: HVAC engineers, architects, civil or structural engineers, project managers, municipal technical services, building contractors, and NGOs.

Programme fee

CHF 8,230.

The Ricola Foundation offers scholarships to a limited number of participants. If you need the scholarship to take part in this course, please mention your reasons and limitations in your motivation letter and contact the Programme Manager.

Duration

1 semester, from September to December, every two years.

Structure and format

- Three modules, each lasting one week (in-person contact), with four online consultancy periods, and a final project presentation to a jury.
- Teaching language: English.
- Complementary teaching methods rooted in active learning, including input lectures, visits to reference buildings, practical hands-on activities, interactive discussions, and group projects.
- 12 ECTS credits.

Other CAS & DAS in Regenerative Materials

To address the shortage of expertise in these areas and to challenge traditional construction methods, we offer three Certificates of Advanced Studies (CAS) in Regenerative Materials at ETH Zurich. Additionally, with the completion of two out of these three CAS it can be combined to a Diploma of Advanced Studies (DAS), which includes supervised personal projects.

Modules

Module 1	Hygrothermal building physics, lecture and visits
Module 2	Regenerative envelopes, hands-on workshop
Module 3	Hygrothermal assessment, simulation workshop
Module 4	Hygrothermal validation, project exercise

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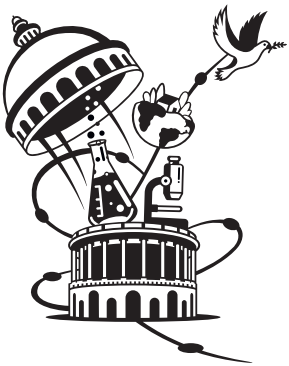

Publisher: ETH Zurich, Institute of Construction and Infrastructure Management
Editors: Arnaud Evrard, Nathalie Dietrich
Layout: Damaris Eschbach
Photos: Polina Saante [1] [2], Ganeshalingam Sarangi [3]