

Module 1
Hygrothermal Building Physics
September: 1 week
Lecture & visits

Module 2
Regenerative Envelopes
October: 1 week
Hands-on workshop

Module 3
Hygrothermal Assessment
November: 1 week
Simulation workshop

Module 4
Hygrothermal Validation
November & December: 5 Fridays
Project exercise



LinkedIn:
ETH - Chair of Sustainable Construction

Instagram:
@regenerative_materials_ethz

Facebook:
@regenerative.materials.ethz

Vimeo:
<https://vimeo.com/ethzsc>

ETH Zürich
Institute of Construction and
Infrastructure Management
Chair of Sustainable Construction

Stefano-Franscini-Platz 5
8093 Zurich

Prof Dr Guillaume Habert
Dr Arnaud Evrard

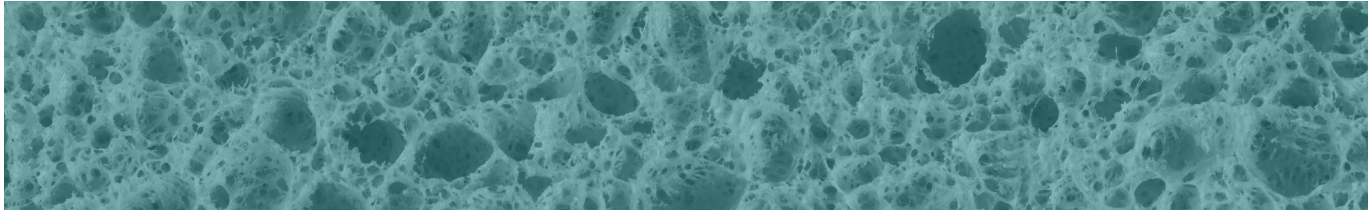
C A S
E T H
R E G -
M A T
E R I A L S

Apply now!

**CAS ETH IN
REGENERATIVE MATERIALS**
Hygrothermal Specialisation

earth - bio-based - reused

ETH zürich



Think Regenerative!

It is time to go beyond sustainability. Alternative solutions out of local resources such as earth, bio-based and reused materials are emerging all over the world and are triggering regenerative outputs, thanks to their capacity to contribute to the restoration and improvement of the surrounding natural and social environment. However, they are not widespread in the construction sector due to lack of information on the side of decision makers and a lack of competence on the side of practitioners.

The three Certificates of Advanced Study (CAS) in Regenerative Materials are international ETH training programmes launched by the Chair of Sustainable Construction of the ETH Zurich aiming to tackle this problem. They offer knowledge and skills to question our conventional construction techniques and to promote Regenerative Materials from resource extraction to construction site, operation and end of life of building materials.

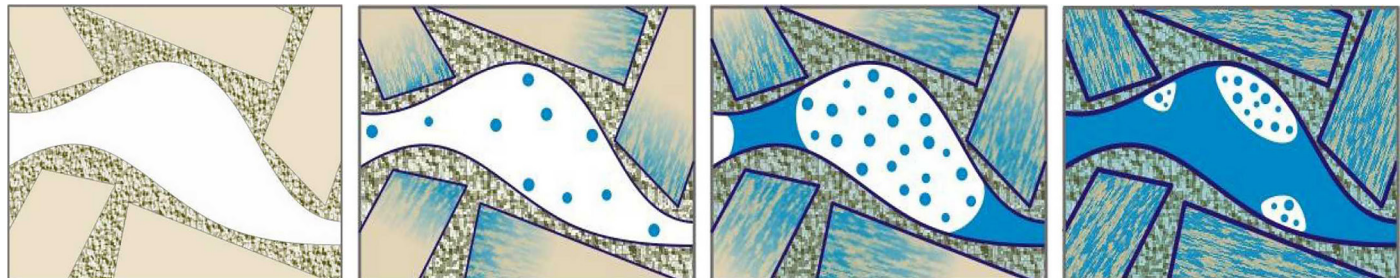
Objectives

The new "CAS ETH in Regenerative Materials – Hygrothermal Specialisation" offers background knowledge on hygrothermal material properties and simulation tools. The programme teaches participants to quantify indoor comfort improvements and energy demands reduction, to forecast moisture-related degradation risks and to allow for durable design and long-lasting performance with Regenerative Materials.



We aspire to:

- Train specialists to conduct complex hygrothermal calculations using Earth and Bio-based materials with realistic and affordable solutions;
- Highlight exemplary architectural projects developing circular economy and the use of "low carbon" solutions and analyze how comfort and energy performances were calculated;
- Offer a practical experience on real projects (new construction or renovation) meeting with relevant stakeholders involved in the new development of Building physics;
- Create a network of professionals working on regenerative construction.



Duration

Starting in September every two years.
12 credits, 3 full weeks + 5 days distributed over 1 semester

Teaching Methods

The courses are held in English and combine complementary teaching methods (lectures, visits, hands-on and group exercises) based on active learning to ensure an efficient and durable impact on the professional development of the participants.

Target audience

8-12 participants from Switzerland and abroad: HVAC engineers, architects and project managers, members of city technical services, building contractors, NGOs.

Application

Applicants are asked to apply online providing a motivation letter, a CV and two reference letters.

Tuition fees

CHF 7,000. Living expenses are not included. The Ricola Foundation supports this CAS and is covering the tuition fee of two participants with financial difficulties.

For more information, visit the website:

<https://sc.ibi.ethz.ch/en/education/continuing-education/cas-regenmat-hygrothermal.html>