AchieVE ZEB

Co-funded by the European Union

AchieVE-ZEB: Competences in Climate-neutral Building Renovation

Climate-neutral Buildings Require New Skills

The renovation of existing buildings is essential to achieving the European Union's climate goals. Reaching a zero-emission building stock requires not only innovative technologies but also a highly skilled workforce across the entire construction value chain. To address this need, the EU-funded AchieVE-ZEB (Achieving Climate-Neutral Buildings with Viable Educational Programs) project develops innovative education and training programs that equip professionals with the knowledge and skills required to design, renovate, construct, and operate climate-neutral buildings.

The project is implemented by the Austrian Energy Agency (coordinator), the University for Continuing Education Krems, Energie Agentur Steiermark, the University of Innsbruck, Passive House Austria, the Passive House Institute (PHI), and GIH Bundesverband.

New Course Offerings for the Construction and Real Estate Industries

As part of the project, existing training and continuing education programs were analyzed and expanded to incorporate the latest findings from research and practice. The learning programs developed address topics such as:

- High-performance and step-by-step building renovation
- Energy-efficient heating, cooling, and ventilation systems
- Industrialized, serial, and modular renovation solutions
- Summer thermal comfort and climate resilience
- Circular economy principles and life-cycle thinking
- Effective communication and stakeholder collaboration throughout the renovation process
- Integrated and interdisciplinary skills for building design, construction, and operation

The course formats developed and piloted as part of the project include, among others:

- Micro-credential programs as modular, combinable learning opportunities for step-by-step skill development
- Blended learning programs with online and in-person components for flexible, part-time continuing education
- Train-the-trainer programs for sustainability-focused adult education
- Short-format programs for part-time continuing education

Innovative Learning Methods for Practical Application

AchieVE-ZEB relies on modern and practical learning formats. In addition to traditional learning content, the program utilizes instructional videos, mock-ups, on-site training, construction site tours,

and e-learning modules. These tools make it possible to present complex renovation measures in an understandable way and to provide hands-on training in the practical application of quality standards.

Evaluations to date show that participants find hands-on learning methods, real-world case studies, field trips, and interactive formats particularly valuable.

Results of the Pilot Phase

Most of the pilot courses have already been successfully completed. Participants were able to significantly expand their skills in key areas of climate-neutral building renovation. Particular emphasis was placed on:

- Improved knowledge of energy-efficient renovation strategies
- Greater understanding of holistic renovation concepts
- Greater emphasis on communication and user perspectives
- Improved skills in sustainability-oriented educational work
- Improved practical skills

The courses reached not only planners and energy consultants, but also professionals from the real estate and facility management industries, as well as numerous young professionals.

Interviews and Expert Knowledge Transfer

Interviews with experts from the fields of research, teaching, and continuing education highlight the growing need for practical and interdisciplinary skills in the building sector. Knowledge gaps were cited particularly often in the areas of highly energy-efficient renovations, airtightness, ventilation systems, quality assurance, and collaboration among the various trades.

The interviews also show that future training and continuing education programs should place greater emphasis on practical applications, communication skills, and systems thinking.

Free Training Materials and Project Results

Numerous results are available on the project website, including:

- Concepts for innovative education and training programs
- Guidelines and recommendations for developing educational videos
- Mock-ups and visual aids for practical training and continuing education
- Interviews with experts from the fields of research and education
- Reports, studies, and other project outcomes

These materials support educational institutions, trainers, and professionals in developing and implementing high-quality continuing education programs on climate-neutral building retrofits.

Further information and project results: achieve-zeb.eu