**Project number:** 101082898  
**Project name:** “Innovative Master Courses Supporting the Improvement of the Energy and Carbon Footprint of the Ukrainian Building Stock” - UKRENERGY  
**Project duration:** 36 months  
**Project starting date:** 01/04/2023  
**Project end date:** 31/03/2026  
**Call:** ERASMUS-EDU-2022-CBHE  
**Topic:** ERASMUS-EDU-2022-CBHE-STRAND-2  
**Type of action:** ERASMUS Lump Sum Grants  
**Granting authority:** European Education and Culture Executive Agency (EACEA)  
**Project Coordinator:** University of Genoa (UniGe)  
**Project Manager:** Angelo Musaio, head of UniGe ICO

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**Brief description:**  
With its considerable population and high energy consumption, Ukraine is one of Europe’s largest energy markets. It is also the country that transits most natural gas worldwide playing a pivotal role in delivering Russian gas to European markets. According to International Energy Agency (IEA), the building stock represents the 30% of energy consumption in Ukraine ex aequo with industry. Based on this, it can be said that buildings have a prominent role in the energy consumption share, therefore they are pivotal for the implementation of energy efficiency policies.

Most of Ukrainian building stock was built in the Soviet Union period. Due to the significant age, worn-out state of structures and engineering systems, such houses consume 40%-70% more energy than new buildings. Therefore, there is an urgent need for retrofitting and of professionals able to design appropriate refurbishment interventions. Ukrainian government estimated that the country building stock consumes 2-3 times more energy than the EU member states, independently from the climatic conditions. Investing in the energy efficiency of the building stock will give the possibility to meet the requirements set by the EU 2030 and 2050 objectives in order to implement the EU Green Deal.

UKRENERGY has taken an endogenous approach to address the challenges. It aims at implementing new Master Courses, including the establishment of up-to-date laboratories, the development of advanced teaching material, and the introduction of innovative teaching/learning practices for both engineers and scientists seeking for a high qualification in Energy Efficiency, Buildings Retrofitting, and Energy Planning. The new Master Courses will promote the implementation of the Bologna Process (BP) in Ukrainian Higher Education system. One of the key issues in the development of this ambitious program will be the retrain of local teaching staff by means of cooperation with EU leading experiences. Another expected outcome regards the cooperation among Ukrainian Universities and local stakeholders for the definition of a coherent professional profile. Stakeholders will be involved in the curriculum preparation stage to guide the development of the specialists they require.

In this regard, master courses are not only attractive for young students, but also for experienced engineers, who are willing to leave corporate structures and to get an opportunity to experience fast growth and contribute to a more stable economy at the same time.

In terms of jobs creation, if Ukraine implements its energy strategy there will be a huge demand of expert in building energy efficiency, for both public authorities and companies. Alongside the
implementation of the energy strategy, there will be a boost in the demand of energy efficiency experts, because all the companies working in the field of energy, real estate, finance, etc. need to design and propose appropriate technical solution, to analyse and monitor market trends, to orient their investment decisions.

General objective:
To promote teaching and learning excellence in Ukraine by establishing innovative Master Programs on Energy Sustainability in Buildings, which are in line with the Bologna Process principles.

Specific objectives:
- To create flexible, efficient, and high-quality M.Sc. programmes in the domain of Energy Sustainability of Buildings, with solid employment perspectives, by means of implementation of Master Courses (MCs) in four main UAUs (Kyiv, Odessa, Dnipro, and Lviv), and innovative modules in four twinning universities of the same regions having specific training.
- To support curricular reform process by developing SPs in line with updated BP principles.
- To enhance the expertise of UA teaching staff to meet labour market demands and to direct the teaching offer towards problem solving of energy and building renovation issues.
- To guarantee the mainstreaming of the upgraded educational approach and their exploitation beyond the project lifecycle through different dissemination actions.
- To spread, foster, enhance the knowledge towards the European Green Deal and the requirements set by EU 2030.

Work packages:
- **WP1.** Harmonization of academic approaches and stakeholders’ engagement for developing the new Master Courses.
- **WP2.** Development of Teaching Material, Infrastructures, and Activities.
- **WP3.** Capacity building of UA junior teaching staff.
- **WP4.** Quality control and monitoring by systematic tools and events.
- **WP5.** Transfer of the improved educational elements and of the project results.
- **WP6.** Sustainability and exploitation actions.
- **WP7.** Project Management & Implementation.