



Masonry Mechanics – 3K (periodic evaluation)

About the Course

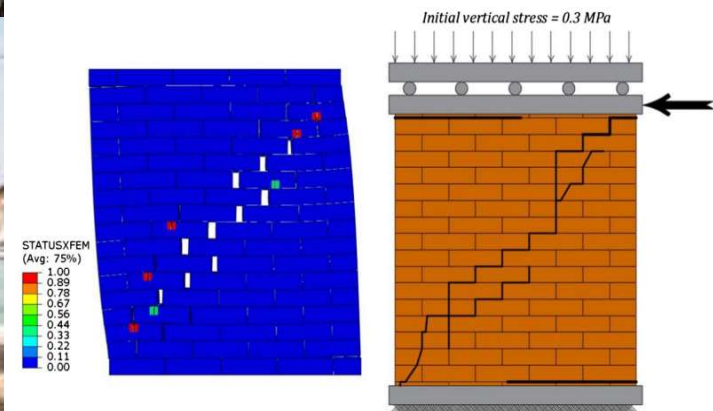
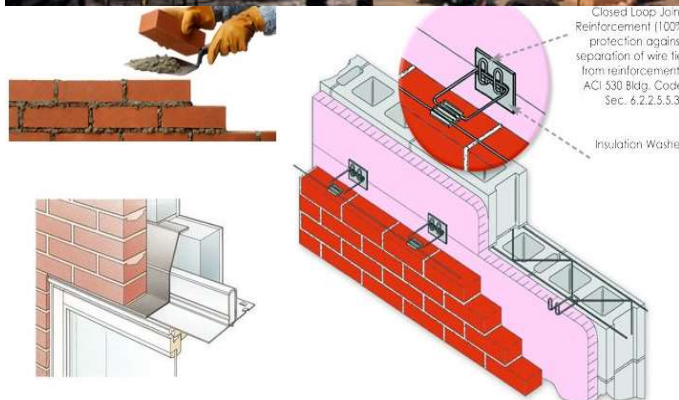
The course is addressed to the 4th year students of the Faculty of Civil Engineering and Building Services from Iasi. This course provides a thorough introduction to the principles and methods of an ancient constructive system used nowadays in a modern and actual way. The course describes the overall composition and calculation of load-bearing masonry wall structures for buildings. The students learn about the design principles of masonry structures according to the new European (Eurocode 6) and national requirements of specific performance and mechanical strength (P100).



Course Structure

100 minute lectures, once per week and 100 minutes laboratory once every two weeks. For more information about content see CURRICULUM at:

< https://ci.tuiasi.ro/wp-content/uploads/decanat/Planuri%20de%20invatamant/2020-2024/FD_ICE/CE414_FD_ICE_a.pdf >



THERMOPHYSICAL REHABILITATION OF BUILDINGS

Contents:

- ❖ **Introduction:** Principles of thermo-energetic rehabilitation of buildings. Performance criteria and requirements. Technical expertise and energy audit. Functional, structural, and thermal rehabilitation. Assessment of rehabilitation possibilities. Major renovation.
- ❖ **Insulating materials:** Physical characteristics. Classification. Presenting materials. Criteria for use. Choosing materials.
- ❖ **Solutions for thermal rehabilitation of facades:** Constructive solutions for walls. Application of thermal insulation to the outside/inside. Thermal bridging influence. Energy rehabilitation solutions for glazed surfaces.
- ❖ **Thermal rehabilitation solutions at the roof level:** Terraces. Cold pitched roofs. Warm pitched roofs.
- ❖ **Thermal rehabilitation solutions at the ground level:** Slabs over the basement. Slabs on the soil.
- ❖ **Technical conditions for execution**
- ❖ **Responsibilities of stakeholders**

The aim of this course is to introduce the principles, solutions and processes of thermophysical rehabilitation of buildings, to select thermophysical rehabilitation interventions and to verify the quality of the selected solutions by assessing the hygrothermal behaviour of buildings.



A huge potential for energy savings lies in the renovation of the existing building stock. It is a prerequisite that these buildings are renovated “deeply” for the building sector to reduce their greenhouse gas (GHG) emissions and meet global energy reduction objectives.

