PREPARATORY TASKS – WORKSHOP 1

ANALYSIS OF CASE STUDIES: SUSTAINABLE, HIGH-PERFORMANCE TIMBER BUILDINGS

Task formulation:

Students should select a timber building (housing, 3-4 floors) from the country of origin and examine its architectural concept, structural system, building physics, assembly techniques and sustainability. They are expected to work in groups of five and gain essential understanding of the principles behind timber structures.

Components of analysis

- **Architecture:** concept, typology, plans, urban integration, flexibility
- **Statics/ Structural Grid:** deinforcement, vertical and horizontal load transfer
- **Building Construction:** details, assembly site, construction and tendering process, element sizes, joining technology, assembly work, dismantling concept
- **Building Physics:** sound-head-moisture management, fire protection
- **Sustainability Concept:** social, ecological, economical

Type of assessment: group work (national teams, group of 5 students)

Number of hours: 25h

Learning Outcome: Conducting a detailed technical analysis of a timber building enables students with diverse knowledge backgrounds to reach a common level of understanding, thereby establishing a solid groundwork for the development of the main assignment.

Applied during: O2 intensive course in Vienna, Austria (September 2021, Host University: FHCW)