



SHORT RENOVATION COURSE PROGRAMME

The title of the workshop is: "A short renovation course" and it is divided into two parts:

- **1.** virtual part, 27 28.09.2023, Zoom
- 2. physical on-site activity, 02 06.10.2023, Tallinn

All students need computers to work!

10 (max 12) students from each country, in total 30, it means 5 groups (each group has 2 students from each university, in total 6 students)

The student's assignment is to survey an existing building and propose a renovation solution for it. Each group will get one topic to solve in the physical part of the programme. Assignments will be prepared for all topics before the virtual part. The topics are:

- 1. building physics;
- 2. basics of heating and ventilation and energy efficiency;
- 3. cost estimation;
- 4. reinforced concrete research (TTK has all the necessary equipment)

5. Revit model and detailing joint types for renovation solutions (e.g. foundation to exterior wall to floor; exterior wall to ceiling; roof to ceiling, exterior wall to window and door, ect).

Credits given: 3 ECTS





VIRTUAL PART in Zoom, 27 – 28.09.2023

• Zoom link: TBA

• For the virtual part all students from each country will gather together in one room to work efficiently. After each lecture, students will be divided into international groups, to discuss the topic and make a short presentation.

• After each lecture, students will be divided into to 5 international groups to discuss about the topic. During that, all student groups will make mindmap in Miro environment. One of the groups is persenting their ides during 5 minutes. After that there is 10 minutes for discussion (eg other groups can add someting).

• Mindmap in Miro

DAY 1, Wednesday, 27th of September, room in Estonia A212

- 13:00 introduction to this BIP project
- 13:30 introduction of the building, assignment explanation
- 14:00 lecture how and what to survey during the visit
- 14:30 lecture building physics
- 15:00 15 min discussion (breakout rooms in Zoom, mindmap Miro), 5 min presentation for one
- group, 10 min for questions
- 15:30 break
- 15:45 lecture basics of heating and ventilation and energy efficiency
- 16:15 15 min discussion (breakout rooms in Zoom, mindmap Miro), 5 min presentation for one group, 10 min for questions
- 16:45 conclusion of the day
- 17:00 end of the workday

DAY 2, Thursday, 28th of September, room in Estonia A212

13:00 lecture - cost estimation

13:30 15 min discussion (breakout rooms in Zoom, mindmap Miro), 5 min presentation for one group, 10 min for questions

- 14:00 break
- 14:15 lecture reinforced concrete research
- 14:30 15 min discussion (breakout rooms in Zoom, mindmap Miro), 5 min presentation for one
- group, 10 min for questions
- 15:00 break
- 15:15 lecture revit model and detailing joint types
- 15:45 15 min discussion (breakout rooms in Zoom, mindmap Miro), 5 min presentation for one group, 10 min for questions
- 16:15 conclusion of the day
- 16:30 end of the workday





SHORT RENOVATION COURSE PROGRAMME IN TALLINN, 02 – 06.10.2023

| Programme | <u>Monday, 2nd of October, room B306, B306A</u> |
|---|---|
| 9:00 | Welcome to TTK |
| 9:30 | getting to know each other, making groups, assignment explanation |
| 12:30 | lunch |
| 13:30 | site visit |
| 15:00 | back to university, discussion using activity exercises |
| 17:00 | end of the day |
| 18:00 | evening activity for students (billiard or similar) |
| evening activity for lecturers (dinner) | |

Tuesday, 3rd of October, room B306, B306A

- 9:00 groupwork
- 12:30 lunch
- 13:00 visiting TTK's laboratories
- 14:30 groupwork
- 17:00 end of the workday

Wednesday, 4th of October, room B306, B306A

- 9:00 pitch of work that has been done by that time, feedback
- 12:30 lunch
- 13:30 visiting a wood factory, Timbeco
- 17:00 end of the workday

Thursday, 5th of October, room B306, B306A

- 9:00 groupwork
- 12:30 lunch
- 13:00 visiting BIM cave
- 14:00 groupwork
- 17:00 end of the workday
- 18:00 evening activity (Seaplane Harbour or similar)

Friday, 6th of October,room B306, B306A

- 9:00 groupwork finishing reports and PowerPoint presentations
- 12:30 lunch
- 13:30 presentations (20 min/group + 10min discussion), feedback, getting diplomas
- 17:00 end of the course, free time, going home.