

BMEEPESA201

Building Constructions I. – Traditional walls, floor constructions, stairs, semester project

Distance Learning System

1./ SUBJECT AND PURPOSE OF THE PROJECT

To prepare the working drawings of the enclosed multi-storey block (basement, groundfloor + 1-2 floors) residential building with up-to-date structures. The determination of the loadbearing walls, floor constructions and complementary structures is part of the task.

During project preparation, student must apply the indication rules and regulations of the working drawings and learn the procedure of determination and the joints of different building structures.

2./ TASKS

1ST SEMESTER PROJECT

Architectural floorplan and section

Prepare the working drawings of the multi storey residential building (upperfloor plan and section), the sanitary engineering equipments (basin, bath, heating equipments, etc.) should be indicated according to the rules practised at the workshop exercises. Different thickness must be used for the varied types of lines!

Should be handed in (in ink/ in pencil + texts, figures and range marks in ink):

- * upperfloor plan 1:50;
- * 1 section (normal to the loadbearing direction, crossing openings) 1:50.

Brick bond - walling

Prepare the brick bonds of a structurally interesting part of the elevation of the residential building. The setting of the bricks (blocks), the way of the spanning (lintel type, arch) indicating with sideview and characteristic details should be demonstrated on the drawings.

Should be handed in (in ink/ in pencil+ texts, figures and range marks in ink):

- * brick bond part of the external wall (elevation without finish render/cladding but with the place of the external door and window) with 2 partial sections (with finish render/cladding and with the place of the external door and window) (1-crossing a solid part, 1-crossing a window or balcony door): 1:20;
- * brick bond details (1 external quoin, 1 "T"-junction for the external wall and the party wall joint, 1 quoin or "T"-junction including external and/or internal and/or party walls); the brick bonds (details) should be indicated with the plastering or other external or internal insulating layer or cladding.: 1:10;

The deadline of the submission is assigned in the 'topics schedule' of the semester.

2ND SEMESTER PROJECT**Structural floorplan**

Prepare the structural floorplan of the residential building's upper floor. Prefabricated concrete floor elements should be applied for the slab constructions.

Should be handed in (in ink/ in pencil + texts, figures and range marks in ink):

- * upperfloor structural floorplan 1 : 50;
- * section in one direction of the floor offering maximum information 1 : 50;
- * 4 details for the slab construction (external and internal loadbearing wall ringbeam joints, lintel, loggia – floorslab joints, shaft, partition wall supporting) 1 : 10.

Stair plan

Prepare the working drawing of the reinforced concrete upperfloor stair for the multi storey residential building. The project should be developed with using the “turning edge (landing slab) method”. The form of the well, the starting and arriving steps, and the shape of the banister must be demonstrated on the details.

Should be handed in (in ink/ in pencil + texts, figures and range marks in ink):

- * architectural upperfloor plan of the staircase with 1 longwise section (the support must be undicated) 1:20 or 1:25;
- * details about the most interesting joints (at least 3 p.: the “turning edge” detail plus 2 optionals) 1:10, 1:5, 1:2.

The deadline of the submission is assigned in the ‘topics schedule’ of the semester.

3./ GENERAL NOTES AND REQUIREMENTS:

The projects have to be drawn on standard size A/3 (297/420 mm) drawing paper, prepared as indicated (in ink/ in pencil + texts, figures and range marks in ink). Computer work is not accepted!

The Department can't accept the semester project on which there is no difference in the thickness of the different types of lines.

The task floorplan and the task data sheet have to be handed in with the projects.

Budapest, 29 March 2020

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