**Design of Buildings I. (Residental Buildings)**

**Code: MFETE31SS3-EN**

**ECTS Credit Points: 3**

**Evaluation: exam**

Year, Semester: 3rd year/1st semester

Number of teaching hours/week:

Lecture: **1**

Practice: **2**

**Prerequisites:** Building Construction I.: MFMAG31S04-EN

**Topics**:

This course presents the functional rules of residential building design such as dimensions of rooms, fixtures and furniture with their space limitations. Descriptions from OTÉK, requirements from local development plans, specifications and calculation about forming facades. Significance of orientation. House featuring schema – detached, semi-detached, row houses, atriums. One and multi-storey residential buildings. Arrangements, ground plan systems and functional rules for design of staircases. Shaping the mass, adoptions to the environment. Space requirements for parking, garbage storages, common areas and elevators in multi-unit residential buildings.

**Literature:**

Malcolm Millais: Building structures

Philip Garrison: Basic Structures for Engineers and Architects

Ernst Neufert : Arhitects' data

Jürgen Adam, Kathariana Hausmann, Frank Jüttern:  Industrial Buildings

**Schedule**

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| --- | --- |
| **1st week:**  **Lecture:** Introduction, installation, site concept, content description of a master plan.  **Practice:** First homework- 25 pieces of furniture, fixtures copying in scale 1:50 M  **2nd week:**  **Lecture:** Development of housing premises, their link to each other, function diagrams.  **Practice**: It’s the deadline of the first homework.  Analysis of function diagrams  **3rd week:**  **Lecture:** Description of housing types, freestanding, semi-detached -terraced houses, house chains, atrium - in terms of integration  **Practice:** Second homework: 5 various built-storied house plans  **4th week:**  **Lecture:** Description of a floor plan in residential buildings – function diagrams –such as the boundary, detached, semi-detached houses.  **Practice:** Deadline for the second homework.  **5th week:**  **Lecture:** Description of a floor plan in residential buildings – function diagrams- such as the boundary, detached, semi-detached houses.  **Practice:** Design of a residential one-floored house.  **6th week:**  **Lecture:** Plan systems of two-storey houses, positioning stages, front height - Interpretation of building height.  **Practice:** Evaluation of the last practice. Third homework. A two-storey house design.  **7th week:**  **Lecture:** Two-storey houses plan system, positioning stage, floor plans.  **Practice:** Calculation of building height. 3rd homework consultation. | **8th week:**  **Lecture:** This week is forpreparing the main project. Consultation in announced appointments. The week of test writing.  **Practice:** -  **9th week:**  **Lecture:** Multi-unit residential building types, corridor-related systems  ground floor plans, function diagrams  **Practice:** Consultation  **10th week:**  **Lecture:** Corridor-related systems, ground floor plans.  **Practice:** Consultation.  **11th week:**  **Lecture:** Multi-residential building design, and its problems, parking spaces, common areas, elevators.  **Practice:** Consultation.  **12th week:**  **Lecture:** Multi-residential building connections, roof types.  **Practice:** Consultation. Signature.  **13th week:**  **Lecture:** Multi-residential building ground floor plans focus on structure design.  **Practice:** Consultation. Deadline of the 3rd homework.  **14th week:**  **Lecture:** Facades.  **Practice:** Evaluation for the 3rd homework.  **15th week:**  Preparation and correction week for the semi-annual project, consultations only in announced time. The week of the end-term test. |

**Requirements**

**A, for a signature:**

Attendance at **lectures** is recommended, but not compulsory.

Participation at **practice classes** is compulsory. Students must attend the practice classes and may not miss more than three times during the semester. In case a student does so, the subject will not be signed and the student must repeat the course. Students can’t make up a practice with another group. Attendance at practice will be recorded by the practice leader. Being late is counted as an absence. In case of further absences, a medical certificate needs to be presented. Students are required to bring the drawing tasks and drawing instruments for the course to each practice. Active participation is evaluated by the teacher in every class. If a student’s behavior or conduct doesn’t meet the requirements of active participation, the teacher may evaluate his/her participation as an absence due to the lack of active participation in class.

Students have to **submit all the drawing tasks** as scheduled minimum at a sufficient level.

Students have to earn at least 38 points during the semester for signing and examination. That’s minimum of the half-year performance.

**B, for a grade:**

Mid-semester (AW5) :

Homework 1 and 2: 2 x 5 = 10 points (min. 2 x 3 = 6 pont)

Homework 3: 1 x 30 = 30 points (min. 1 x 16 =16 pont)

Practise 1-3: 3 x 10 = 30 pont ( min. 3 x 6 = 18 pont)

The condition of the signature, and the exam-release is the performance, which have to be more than 50%, min. 40 points.

Score Grade

0 - 39 1 (fail)

40 - 47 2 (pass)

48 - 54 3 (satisfactory)

55 - 62 4 (good)

63 - 70 5 (excellent)

It is necessary to retake every unsatisfactory performance. (exam, research, project)

If the written exam does not exceed the 50%, it is mandatory to retake the exam, repeat all the elements within it.