**Design of Buildings II (Industrial & Agricultural Buildings)**

**Code: MFETE32SM3-EN**

**ECTS Credit Points: 3**

**Evaluation: exam**

Year, Semester: 4th year/1st semester

Number of teaching hours/week:

Lecture: **1**

Practice: **2**

**Prerequisites:** Design of Buildings I.: MFETE31SS3-EN

**Topics**:

This course presents the design methodology of industrial and agricultural buildings. Functional rules of industrial and agricultural buildings by OTÉK, limitations about peripheral built-in areas, local development plans, main elements, structures. Specific technology requirements described by animal species. Health and environmental rules. Manure management. Structures and types of storage buildings and plant productions. Industrial parks and their regulations, standards. Logistics and service facility needs. Structures of industrial buildings, particularly in light weight structures. Design of social and service spaces, lockers and wet rooms.

Fire protections: Basic rules, structures and classification of buildings based on OTSZ.

**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:** Preparation, application for the courses, description of subject requirements, course schedule and literature lists, registration week**Practice: -****2nd week:** **Lecture:** History of Hungarian agricultural architecture, government regulations, the provisions of relevant OTÉK Opportunities for farm-site construction**Practice:** Research - description of 3 processed agricultural structures - scheme, definition of static models and enveloping options.**3th week:****Lecture:** Presentation of livestock farms and prescriptions, animal health considerations and manure management.**Practice:** Consultation.**4th week:****Lecture:** Horse farming, stables, farming buildings, sheep farming**Practice:** Consultation.**5th week:****Lecture:** Cattles, pig farming buildings**Practice:** Consultation.**6th week:****Lecture:** Storage buildings in agriculture**Practice:** Consultation.**7th week:****Lecture:** Wine processing, wineries, farm buildings**Practice:** Deadline of the 1st project | **8th week:****Lecture:** Fire protection, basic concepts, classification of buildings, structure halls, fire distances, fire loads**Practice:** Research - description of 3 processed agricultural structures - scheme, definition of static models and enveloping options**9th week:****Lecture:** Industrial parks and it’s benefits. Classification of Dressing rooms. **Practice:** Consultation**10th week:****Lecture:** Preparation week for the semi-annual project, consultations only in announced time. A week for the semi-annual tests.**Practice:** Design of dressing rooms.**11th week:****Lecture:** History of reinforced concrete, reinforced concrete long-span structures, the benefits of prefabrication**Practice:** Deadline for the 2nd project. A small Test.**12th week:****Lecture:** Steel structures, hall structures. **Practice:** Opportunity to resit the test.**13th week:****Lecture:** Industrial coatings, classical and light enveloping, wall and roof structures. **Practice:** Consultation.**14th week:****Lecture:** Details of structures, industrial gates.**Practice:** **15th week:**Preparation and correction week for the semi-annual project, consultations only in announced time. The end-term test this week. |

**Requirements**

**A, for a signature:**

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

Participation at **practice** is compulsory. Students must attend the practices 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 class 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. Missed practices should be made up for at a later date, being discussed with the tutor. 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.

Special conditions for signing and examination: Minimum: a half year performance means 38 points. Satisfactory: performance of the two mid-semester projects.

**B, for a grade:**

Mid-semester :

Exam (ESE): 2 x 25 50 points

Study: 2 x 25 50 points

 100 points

The condition of the signature, and the exam-release is the performance on the exam, which have to be more than 50%, means min. 52 points.

End of 2nd Semester Examination (ESE)

Written 50 points

A total of 150 points

The minimum requirements for the mid-term and end-term tests are 50% bound, it means min. 78 points.

Score Grade

0-77 fail (1)

78-95 pass (2)

196-113 satisfactory (3)

114-132 good (4)

133-150 excellent (5)

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.