

Building Service Systems I.

Code: MFEUG31EE2-EN

ECTS Credit Points: 2

Evaluation: exam

Year, Semester: 3rd year/1st semester

Number of teaching hours/week:

Lecture: 2

Practice: 0

Prerequisites: -

Topics: Theory of gas supply systems, heating systems, ventilation and air conditioning systems, cold and hot water systems, sewage systems.

Literature:

1. Robert McDowall, Fundamentals of HVAC Systems: SI Edition, Academic Press, 2007.
2. William Bobenhausen, Simplified Design of HVAC Systems, Wiley, 1994.
3. Billy C. Langley, Fundamentals of Air Conditioning Systems, The Fairmont Press, Inc., 2000.

Schedule

| | |
|--|---|
| 1 st week: Components and materials of gas transportation systems. | 7 th week: Types of ventilation systems. Conception and steps of planning ventilation and air conditioning systems of buildings. |
| 2 nd week: Conception and steps of planning gas supply systems of buildings. | 8 th week: Drinking water quality. Requirements. Drinking water sources. |
| 3 rd week: Components and materials of heating systems. | 9 th week: Conception and steps of planning drinking water supply systems of buildings. |
| 4 th week: Types of heating systems: individual and central heating systems, radiation heating. | 10 th week: Water supply systems for high buildings. Sewage systems. |
| 5 th week: Conception and steps of planning heating systems of buildings. Operation of heating systems. | 11 th week: Local and central preparation of hot water. |
| 6 th week: Components and materials of ventilation and air conditioning systems. | 12 th week: Hot water preparation equipment, storage tanks. |

Requirements

A, for a signature:

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

During the semester there are two tests: the mid-term test in the 8th week and the end-term test in the 15th week. Students have to sit for the tests.

B, for a grade (ESE):

Examination consists of two parts:

- Two exercise tests during the semester.
- a 20–minute long theory test.

The minimum requirement for the mid-term and end-term tests is 60%. Based on the score of the tests separately, the grade for the tests is given according to the following table:

| Score | Grade |
|--------|------------------|
| 0-59 | fail (1) |
| 60-69 | pass (2) |
| 70-79 | satisfactory (3) |
| 80-89 | good (4) |
| 90-100 | excellent (5) |

If the score of any test is below 60, the student once can take a retake test covering the whole semester material.