

Course Syllabus

Building Services 7.5 Credits*, First Cycle Level 1

Learning Outcomes

The overall goal of the course is for students to gain knowledge and skills in system design and the function of facilities for heating, ventilation, hot water, sewage and sanitation systems in buildings.

Upon completion of the course, students shall be able to:

- explain what determines thermal indoor climate
- explain the hygiene requirements for a healthy indoor environment and air quality
- describe the design of and material for water and sewage systems in buildings
- describe the function of and material for different types of heating and cooling systems
- dimension heating systems for the right climate
- calculate the effect and energy requirements for heating and hot water systems
- describe the function of and material for different types of ventilation systems
- dimension ventilation ducts according to standards
- describe service installation drawings and demonstrate an understanding of them
- explain the norms governing building services
- work independently and in groups on a services project
- evaluate the performance and sustainability of building service systems

Course Content

The course starts with discussion on how the indoor climate affects human beings. The course then focuses on the heat balance of buildings, the building and dimensioning of heating and cooling systems, and the calculation of power and energy needs. The building and dimensioning of ventilation systems, and the building and dimensioning of water and sewage systems are also taken up. Finally, standards and drawings for the presentation of building services systems are covered.

Assessment

Written examination, 4 credits

Project work with written examination and seminars, 3.5 credits

Forms of Study

Lectures and project work

Grades

The Swedish grades U, 3, 4, 5.

Project work with written examination and seminars (pass/fail)

The final grade is dependent on the written exam.

Prerequisites

Building Physics 5 credits, First cycle Level

Other Information

Replaces BY1043

Subject:

Construction

Group of Subjects:

Building Technology

Disciplinary Domain:

Technology, 100%

Approved:

Approved 23 November 2015

Valid from 1 January 2016