F1D5303 Climate Technology, Fundamentals 7.5 credits

Klimatteknik, grunder

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for F1D5303 valid from Spring 2018

Grading scale

undefined

Education cycle

Third cycle

Specific prerequisites

Master of Science in Civil and Architectural Engineering or similar, with an undergraduate course in indoor environment/energy systems/building services technologies or equivalent.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

The objective of this course is to provide a deeper understanding of the fundamentals of indoor environmental management and quality control in buildings with key focus on issues related to indoor air quality, thermal comfort, lighting quality, quality of the acoustic environment, user well-being and satisfaction, as well as user productivity. Relevant issues are discussed with the over-arching goal of achieving high indoor environmental quality and user satisfaction, high energy efficiency, as well as optimal overall building performance.

Course contents

The fundamentals of indoor environmental management and quality control are discussed in the context of:

- User/occupant needs, well-being and satisfaction in indoor environments
- Indoor air quality
- Thermal comfort
- Lighting quality (including daylighting)
- Quality of the acoustic environment
- Load and energy calculations
- HVAC design and operation

Course literature

The course literature is specified before each course offering and disclosed in the course program.

Examination

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.